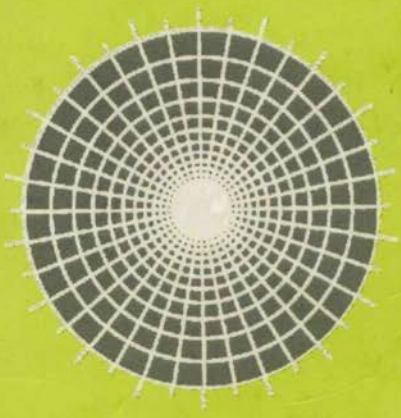
Willem Hulsink



Do nations matter in a globalising industry?

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DO NATIONS MATTER IN A GLOBALISING INDUSTRY ?

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The Restructuring of Telecommunications Governance Regimes in France, the Netherlands and the United Kingdom (1980-1994)

Nationale Instituties in een Mondialiserende Industrie:
De Herstructurering van Telecommunicatie Sturingsregimes in Frankrijk, Nederland, en het Verenigd Koninkrijk (1980-1994)

PROEFSCHRIFT

TER VERKRIJGING VAN DE GRAAD VAN DOCTOR
AAN DE ERASMUS UNIVERSITEIT ROTTERDAM
OP GEZAG VAN DE RECTOR MAGNIFICUS
PROF.DR P.W.C. AKKERMANS M.A.
EN VOLGENS BESLUIT VAN HET COLLEGE VOOR PROMOTIES

DE OPENBARE VERDEDIGING ZAL PLAATSVINDEN OP
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WILLEM HULSINK

GEBOREN TE OMMEN

Promotiecommissie

Promotor: Prof.dr ing. F.A.J. van den Bosch

Overige leden: Prof.dr L. Hancher
Prof.dr J. Kooiman
Prof.dr G. Majone

> "If the form of management is properly to be seen as dependent on the situation the concern is trying to meet, it follows that there is no single set of principles for 'good organization', an ideal type of management system which can serve as a model to which administrative practice should, or could in time, approximate. It follows also that there is an overriding management task in first interpreting correctly the market and technological situation, in terms of its instability or of the rate at which conditions are changing, and then designing the management system appropriate to the conditions, and making it work (Burns & Stalker 1961/1994: xxi-xxii)."

> "We have just seen that the present structure of the PTT administration does not provide for the appointment of a director capable of leading it well. The basic cause of this inability of the Director-General of the PTT lies in the twofold role with which he is entrusted: a political role, obliging him to take part in the demanding ministerial activities; an industrial role, requiring of the person in charge, that he dedicates all his time and efforts to the company. The former of these roles requires a parliamentary specialist; the second an experienced administrator. It is therefore, extremely difficult to find a man who possesses, to a satisfactory degree, the qualities of a politician as well as those of a captain of industry. (..) Either of these roles is so demanding that the double burden cannot be borne by a single person. Therefore the function should be split up and divided between a politician and a manager. (Fayol 1921: 43-44)"

"I remember that we, Bavink and I, once arrived at the sea, when the half-sun was on the horizon, big, cold and red. Bavink struck his forehead with his fist and cursed: "God, God, I will never paint that, I never could." (..) "It's as if that sea wants something from me. In it, God is too. God is calling. It is truly no picnic. He is everywhere . And everywhere He is calling Bavink. You go mad from your own name, when it is called out that often. And then Bavink has to paint. Then God has to be put on a piece of canvas with paint. Then Bavink is calling 'God'. And thus they keep calling one another. To God, it's a game, He is infinite and everywhere. He just keeps calling. But Bavink only has one silly head and one silly right-hand and he can only work on one little painting at a time. And whenever, he thinks he's caught God, then he has canvas and paint. Then God is everywhere, except where Bavink wants Him. (..) Do you know what I wish? That I could make railway time tables. Such a man God leaves in peace, he is not worth the trouble."" (Nescio (1914), *Titaantjes (in Dutch: Little Titans)*. Nijgh & Van Ditmar. (1983: 45/58).

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Preface

The similarities between academic research and the art of painting are striking. Both the academic and the painter feel an almost obsessive need to transform a vague and implicit set of ideas into an artefact that claims a certain degree of originality among the sources it uses and by which it is inspired, in terms of the method and approach, and the distinct argument or perspective it offers. In addition, there are parallels concerning the intangibility of time, which makes planning these endeavours extremely hard, and the difficulty of striking a balance between hard work and skill, and between concentration and inspiration. Furthermore, both the researcher and the artist will experience mixed feelings when the process nears completion, ranging from relief because the job is almost done, to vexation because the work is never really finished, and further details can always be found and nuances added, to the sheer pragmatic necessity of putting in the final touches. Finally, they both are painfully aware that the chances of their work ever receiving a wider audience are slim to say the least.

Perhaps the differences between the two disciplines are equally striking as the similarities. In academia, given the cumulative and evolutionary development of knowledge, one has to acknowledge one's sources explicitly, and indicate where the ideas and data come from upon which one has elaborated. The artist, on the other hand, has a far greater degree of freedom: he can stay within an established and recognised art form, or combine artistic elements into a new eclectic style, or overhaul established routines by ignoring the past and make his individual contribution on canvas. Secondly, the academic is less of an individualist than the painter: he has to depend much more on his colleagues and supportive institutions.

In the light of the above, I am indebted to a large number of people and organisations, without whose support this PhD-research would never have been accomplished. Three people stand out for having been involved in the shaping of this study throughout. From the early beginning until the final stages, Frans van den Bosch, Giandomenico Majone, and Arthur Wassenberg, have contributed in a variety of ways to the finalisation of this job. Their intellectual support and analytical focus certainly have made the argument and structure of the book more transparant and rigorous. They never tired of reading yet another rough draft and coming up with

useful suggestions, while at the same time reminding me all things must at one time come to an end. For this, I am extremely grateful.

While conducting this study, I was fortunate enough to be able to work at the following institutions, who have all contributed in their particular way to its completion:

- *Erasmus University Rotterdam* (Department of Strategic Management and Business Environment);
- *European University Institute* (Department of Political and Social Sciences);
- *Tilburg University* (Department of Policy and Organisation Sciences);
- *University of Sussex* (Science Policy Research Unit).

I would also like to thank the Stichting A.A. Van Beekfonds and the Rathenau Institute for their financial support.

Andrew Davies, Frank Boons, Geert-Jan Kemme, and Harry Bouwman went through sections of the manuscript; their comments are gratefully acknowledged. The contribution of some people in the final shaping of the book should not be underestimated. Gert Stronkhorst improved the English; Wil Geurtsen, Hugo Jan Doeleman, and Jeroen Kreijger formatted the text; Bernardine Walrecht and Edith van Berkel designed the cover page; and Vincent Verweij takes care of the publicity.

This study is dedicated to my family, friends, and colleagues, who all showed their interest in the progress of the research, either by encouraging me to finish quickly, or by putting things into perspective by saying that it is only a book and just another hurdle.

1

Introduction

1.1 *Introduction*

The focus of this research is on the process of monopolisation and de-monopolisation in the West European telecommunications industry. The collectivisation of the provision of telephony and telegraphy, that started at the end of the 19th century and lasted till the 1980s, became institutionalised through statutory monopolies, authorised by the central government and operated by state-owned PTT-administrations. In Europe's mixed economies the state has traditionally played a leading role in key sectors such as railways, telecommunications, and energy by acting as entrepreneur, direct supplier of services, lender of last resort and planner for the industry in question or the economy as a whole (Ambrosius 1984; Jänicke 1990). The European governments relied upon interventionist instruments, such as indicative planning, nationalisations and state monopolies, extensive public works and procurement programmes, and demand creation/income redistribution policies. The increase of state intervention at the sector level was paralleled by the establishment of the welfare state at the macro-level. In his *In Care of the State,* De Swaan (1988) has referred to the gradual rise of nation-wide, collective and compulsory arrangements, that structured the provision of social security and welfare systems. In the formation and implementation of these Keynesian macro-economic policies, the state apparatus was supported by the active participation of centralised labour and employers organisations, jointly combating inflation and unemployment, and securing substantial levels of economic growth (Shonfield 1965). European governments and their recognised social partners had established tri-partite arrangements to settle wage/price levels, working conditions and labour market issues. At the end of the 1970s, European public sectors were relatively large and characterised by an extensive bureaucracy, a substantial degree of public ownership and public resource allocation, and ambitious redistribution and employment programmes. Consequently, the power of civil servants and public sector unions in the political realm was substantial: employees in the nationalised industries had a solid legal and political position, based on the civil servant's statute, reasonable working conditions and extensive participation mechanisms.

As a consequence of the collapse of the Bretton Woods system of fixed exchange rates and the two oil crises in the 1970s, the post-war period of prolonged economic

growth, full employment, low inflation and *organised capitalism* came to an end (Lash & Urry 1987). European economies were hit hard by the subsequent economic recession and increasing competition from Japan and the Newly Industrialising Countries, resulting eventually in de-industrialisation, long-term unemployment and cutbacks in public spending. From the late 1970s onwards, governments have become concerned with how to adjust their stagnating economies to the new techno-economic and international conditions. In order to strengthen Europe's position in a more turbulent and volatile world economy, the established national frameworks, based on extensive welfare state provisions, state-owned infrastructure provision and industrial policies aimed at strengthening the countries' key sectors and national champions, needed rethinking and restructuring. The big challenge for national policy makers in the 1980s, became to prepare domestic firms, strategic sectors and the national economy as such for international competition, and to develop an appropriate mix of strategic responses (e.g. deregulation, privatisation, transnational collaboration, innovation policy, protectionism). Especially in the USA and the UK, politicians, businessmen and intellectuals rediscovered economic liberalism: they promoted the de-collectivisation of the economy by giving clear priority to market mechanisms over government intervention. Littlechild (1978) has raised serious doubts about the large-scale and far-reaching state intervention in the national economy. He argued that private enterprise (*laissez faire)* and the smooth functioning of markets and competition would not only generate overall efficiency gains, but stimulate entrepreneurship and innovation.[1] As illustrated by Swann (1988) in *The Retreat of the State*, before radical deregulation and privatisation programmes were implemented in the US and the UK, the various activities carried out by the governments in the two economies were critically reviewed and discussed in parliament. On the European Continent, conservative and Christian Democratic parties followed the Anglo-Saxon path by giving priority to scaling back welfare provisions, contracting out public services and privatising state-owned enterprises. In the mid-1980s, the Social-Democratic parties were also converted to economic neo-liberalism and they too actively supported pro-market adjustment policies. In their responses to economic stagnation, European governments laid emphasis on curbing public expenditures, administrative reform and deregulation, decentralisation of collective bargaining, shifting resources from sunset to sunrise sectors and modernising traditional industries.

The aim of this research is to analyse and compare the British, Dutch and French strategies for the restructuring in telecommunications. Section 1.2. discusses four exogenous variables, that challenge the sovereignty of national telecommunications regimes in Western Europe, namely the structural forces of technological progress, changing demand and supply conditions (i.e. globalisation and differentiation of communications markets), international deregulation, and European integration.

1 In a similar vein, Weidenbaum (1979) warned against the encroachment of government power in the private sector, generating major inefficiencies throughout society and slowing down industrial innovation and development. He argued for strengthening the position of business through a major reform of both economic and social regulation by cutting back rules and introducing cost-benefit analysis and budget review.

Moreover, the formulation of appropriate domestic strategic responses is constrained by national conditions such as the scale and the degree of openness of the economy, the role of the state in society and the system of interest intermediation. Political strategies are also influenced by the sectoral contingencies of the domestic telecommunications industry and the distribution of power between the incumbents and their political allies, and (potential) new entrants, seeking access to the market place and the policy process. These endogenous variables include the strategic responses of individual actors to the four aforementioned structural forces and the implementation of industrial adjustment policies, varying between the persistence of the state monopoly, corporatisation of the PTT and selective market liberalisation, and full liberalisation together with privatisation. Section 1.3 examines the search for an adequate policy response to international techno-economic restructuring. The formation of industrial adjustment strategies will be discussed against the background of the academic debate in comparative policy and business studies on the validity of cross-national convergence versus national diversity (1.4). The theoretical concepts to be used throughout the study, deriving from organisation theory and political economy, are introduced in 1.5. The first discipline emphasises that organisations, in order to be efficient and effective, seek to enact and control their environment through exchanging and controlling resources and establishing linkages with other organisations. The second discipline is concerned with the way political factors constrain economic behaviour and how market forces and economic policies influence politics. The organisational and institutional perspective adopted in this comparative study on explaining changes in telecommunications policy between the three countries, is offered in 1.6. The research model on the basis of which the study will be carried out, is spelt out in 1.7.

1.2 *Structural Forces Setting the National Telecommunications Agenda*

Traditionally, the provision of telecommunications services and end-user equipment was operated by a state-controlled monopolist, subjected to strong government interference and parliamentary supervision. Within Europe this telecommunications monopoly was organised in a variety of ways: functionally separated monopolies (i.e. between the operation of national and international services: e.g. Italy), geographically subdivided defined monopolies (i.e. on a regional basis: e.g. Denmark) and de facto monopolies (either statutory defined like in Belgium or exclusively operated by a semi-public corporation, like in Spain). In most cases, the telephone service was operated by the *PTT*, organised either as a separate department within the public administration or as a state-controlled public enterprise with more distant, but nevertheless close government links. Originally its exclusive task was to control the telecommunications network and to operate services on break-even schemes. The PTTs were, however, regularly used by the government to pursue other national objectives as well, like fiscal policy, regional development, industrial/employment policy. In some European countries, the PTT monopoly included, besides the provision of public telephone services, exclusive control over related functional areas such as postal and giro services (Foremann-Peck & Müller 1988). The telecommunications administrations collaborated in the provision of international services, thereby minimising the

possibility of competition among national operators and reducing competitive entry by private outsiders. Through two intergovernmental bodies, the *Conférence Européenne des Administrations des Postes et des Télécommunications* CEPT and the *International Telecommunications Union* ITU, the PTTs, agreeing upon joint service provision for cross-border traffic, had established cartel-like arrangements on accounting rates and sharing revenues.

The PTTs, inspired and legitimised by economies of scale and the political objective of socio-economic integration, had expanded the public network to achieve the goal of universal service provision. The PTT/public monopoly model was built upon a system of burden sharing between customers, services and geographical areas: long distance telephone services sponsoring local services and postal services, and business customers subsidising residential users. In addition to this public utility function, the PTT was assigned tasks, such as business-like, regulatory and supportive policy functions, that sometimes interfered with or ran counter to the provision of its public services (see figure 1.1). Instigated by the saturation of the telephone market and technological innovation at the end of the 1970s, the PTTs gradually developed a diversification strategy by attempting to bring new facilities under their exclusive monopoly, that were not directly related to fixed-line telecommunications. They adopted a more offensive and commercial attitude by entering promising markets, like cable, satellites, switched data networks, fax, videotex, electronic mail and cellular radio. These new technologies were considered potential markets, that could be very profitable in the future in addition to the saturating public telephone service. Or interpreted more tactically, such a pre-emptive strategy would also prevent competing service providers, like cable companies, publishers, computing firms and private network operators from entering the telecommunications market. PTT's regulatory and policy functions included the governance and supervision of the telecommunications industry through the setting of rules and standards, allotment of frequencies, equipment approval etc. Moreover, on behalf of the discretionary Minister, the PTT administration was actively involved in draft legislation and policy implementation.

For the supply of telecommunications equipment, European PTTs relied upon the public procurement programmes of their governments and local manufacturing by their *national champion(s)* of the computer/electronics industry (e.g. CIT-Alcatel, Philips, GEC and Plessey). In the USA and Canada, the telecommunications sector was vertically integrated within one industrial conglomerate, in charge of both service provision and manufacturing (AT&T/Western Electric and Bell Canada/Northern Telecom). In Europe, the relationships between the monopolistic network operator and its monopsonistic equipment suppliers could be described as quasi-vertical integration and exclusive trading (Dang N'Guyen 1986). The strong and intense business ties between the public operator and its preferred supplier(s) were protected from new entry and foreign competition by long-term R&D collaboration, collusive standard setting and national certification rules. On a European level, the equipment market was highly fragmented in self-contained national markets, without any substantial international competition among the local manufacturers outside their protected home grounds.

Noam (1987) has qualified the established telecommunications community as a *rent-seeking coalition*, that allows the extraction of selective advantages and the redistribution of the 'surplus' by a coalition of influential stakeholders in a well-organised and highly concentrated industry. In regulated settings such as the telecommunications industry, characterised by exclusive market positions or restricted entry, the government might run the risk of conferring the 'monopoly rents' and redistributional gains to privileged stakeholders, instead of serving the general welfare of society (Buchanan 1980; Mueller 1989: Olson 1982). In other words, public policies might reward specialised, well-organised and influential groups producing regulated goods and services at the expense of the consumers buying them. The PTT and the domestic equipment industry were politically supported by the central government, trade unions, the political left and rural/residential users (Noam 1987,1992; Cawson *et al.* 1990; Steinfield *et al. 1994*). The material and ideological reasons for these parties to support the established setting lay in realising objectives, like protecting key industries against imports and foreign market entry, and keeping up employment schemes, job security & salary guarantees, and to preserve universal service provision respectively. To describe the tight relationships between the public network operator, the domestic private equipment industry, the trade unions, the political system, the residential (or rural) users and the international cartel-like arrangements among the PTT administrations, we will propose the concept of the *national public monopoly regime.*

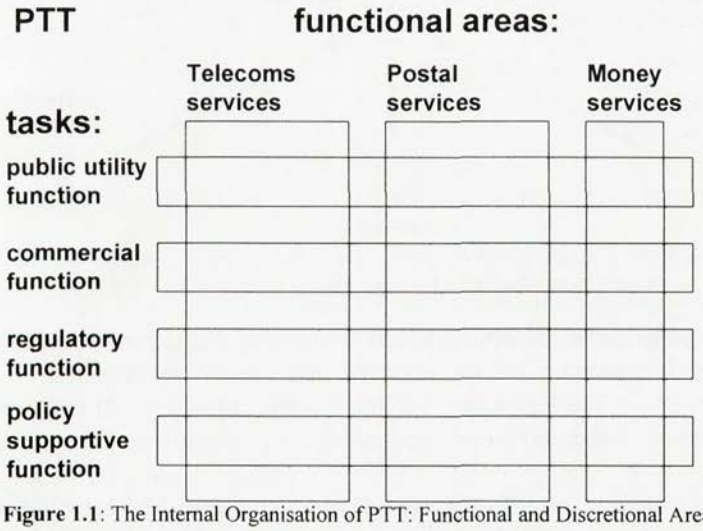

Figure 1.1: The Internal Organisation of PTT: Functional and Discretional Areas

The office equipment manufacturers, dataprocessing industry, large telecommunications users and the transnational suppliers of switching equipment, questioning the public monopoly model and demanding flexible regulations, were to a considerable degree excluded from the selective benefits of the established PTT system (see figure 1.2). Although involved in the introduction of office automation and the upgrading of dataprocessing facilities in the PTT administration, the

computer industry gradually had moved into telecommunications by providing datacommmunications services and equipment to large international users, such as banks, news agencies, publishers, airline companies etc.. Rather than being subjected to a monopolistic pricing regime by a public telephone company, offering mainly conventional telephony, these large users demanded cheap international and customised (data)communications services and facilities. They had built and operated their own private networks on the basis of leased lines or relied upon new network operators, like IBM, GM/EDS and GEIS. The more internationally oriented manufacturers of switching equipment, together with specialised producers of alternative private exchange systems like Mitel and Rolm, also demanded a (controlled) liberalisation of national telecommunications markets. Although most of them participated in rent-seeking coalitions at home, these major equipment manufacturers were willing to enter the sheltered switching market abroad and compete with the privileged supplier(s) of the national PTT.

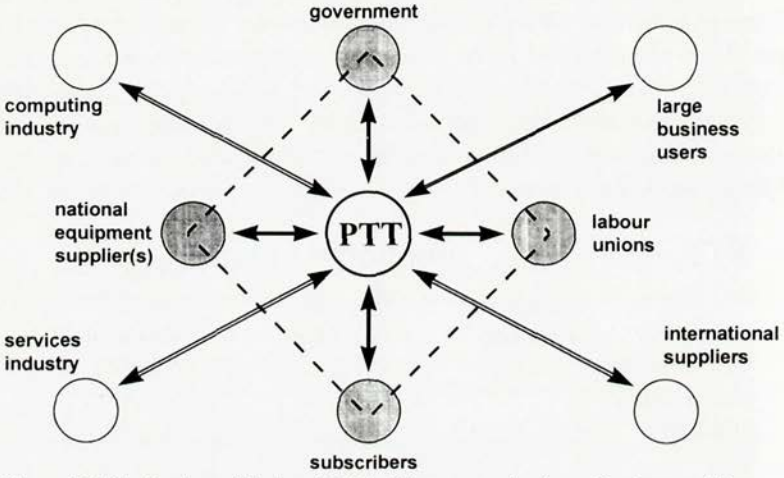

Figure 1.2: The Regime of National Public Tele-communications: The Rent-seeking Coalition around the PTT monopoly.

In short, traditional telecommunications could be characterised as relatively stable with measured expansion of the network and steady developments concerning technology, markets and legislation, relying upon cost-sharing and redistribution. As a consequence of structural developments, the well-organised telecommunications polity started to destabilise in the mid-1970s and a new model of an open and decentralised infrastructure of multiple networks emerged. The established national monopoly regime was seriously challenged by the powerful alliance of the globally oriented services industry and large business users, who were largely excluded from the rent-seeking system around the PTT. This *information & services coalition*, having acquired expertise with private networking outside the PTT, questioned the cost-sharing and redistribution arrangements of the past and promoted the introduction of competition in the protected markets of equipment, services and network provision (Noam 1987,1992). As a consequence of the increasing

dependence of telecommunications on micro-electronics, computing and software programming, firms like IBM, EDS and GEIS have made inroads in the industry and have become politically active in the policy process. The integration of office automation and telecommunications facilities has allowed the provision of value-added networks and new dataprocessing services, not necessarily provided by the PTTs. Large users like Reuters and GM that operate on a global scale have become important players with big stakes in telecommunications. Their dynamic and specialised demand for high-capacity and low cost facilities, to be provided on an international scale, could not directly be met by the national PTTs. For these multinational companies, telecommunications has become simply too important, both in terms of costs and strategy, to be regulated on the basis of an international cartel between national monopolists. Therefore they have built large-scale private user networks, carrying company data-traffic over circuits leased from the public operator. The services-information alliance was supported by those equipment manufacturers that were excluded from the collusive arrangements between PTT and its preferred supplier(s). Today's equipment industry, characterised by rocketing R&D costs, shortening product life cycles and the concomitant search for economies of scale and scope, requires entry to foreign markets in order to recover the huge investments made in the development of advanced switching systems. As a consequence, national entry barriers for aggressive international competitors have started to erode, world trade has expanded and a process of strategic partnering and economic concentration among the national electronics champions has taken place.

In general, the restructuring of European telecommunications has implied a general shift from a stable market environment towards a more dynamic one. The distributional coalition of the traditional telecommunications regime, including PTT, residential users, domestic equipment supplier(s) and trade unions sharing the 'monopoly rents', has been challenged by multiple developments that could not be accommodated within the national public monopoly regime (Noam 1992). The public telecommunications monopoly was established to prevent 'by-pass and cream skimming' and put PTT in charge of the redistribution of charges and universal service provision. However, international equipment manufacturers, the information/computer industry (IBM and GEIS) and new carriers (e.g. MCI, C&W/Mercury, Vodaphone) have responded to the differentiated demands of large businesses, professional users and consumer groupings by providing alternative technologies and private networks that were more flexible, less expensive and cost-based. So technological, market and international developments have made the reshuffling of cross-subsidisation and the 'rent-seeking coalition' around the PTT-administration necessary. In their political claims for free entry, fair competition and cost-based tariffing, these new operators, service providers and large business users were supported by the European Commission with its plans for an integrated market. Although the aforementioned services & information industries by now are accepted as a legitimate stakeholder in the national policy domain, its claims so far have been crushed in the process of log-rolling between PTT and the other established players (Noam 1992). Therefore, a new kind of compromise has to be found that will accommodate both the 'established' parties, strongly in favour of step-by-step

liberalisation, protecting the operator's core monopoly and securing its public service obligations, and (relative) newcomers seeking access to newly liberalised markets and responding to increasing business demand.

In the newly emerging telecommunications system the coordination of economic activities has changed from an administrative hierarchy, represented by the public operator and its network monopoly, to a model of controlled competition, allowing fair competition in the liberalised fringes of the market and the establishment of a new regulatory framework separating the operational and the administrative tasks of the former PTT administration. In order to oversee the market, ensure fair competition and further consumer interests, a system of regulation is introduced to balance the various interests of suppliers, customers, employees and investors. This trend towards liberalisation and regulatory reform is accompanied by a transformation of the former PTT administration from a government department into a corporatised or privatised company, acting relatively autonomous from the government. The PTT administration was forced to rethink its *corporate* goals and transform its internal organisational structure in order to cope more effectively with the demands and pressures from its dynamic environment. The monolithic, hierarchical and centralised structure of the past has been replaced by one that is (more) market-responsive and profit-oriented. The newly established telecommunications companies *telcos* have decentralised their business activities to respond more effectively to the specific demands of its various customer groups (e.g. households, business customers). Nowadays, the former PTTs have established separate divisions, strategic business units, profit centres and joint ventures, all based on different product-market combinations and flexible operations. They have diversified into new markets like data processing, equipment manufacturing, cable & audio-visual production, enhanced services provision, network & facilities management etc. The telcos also expanded internationally by seeking access to new geographical markets (often through acquisitions and strategic alliances), and serving multinational business customers.

The scope of PTT's monopoly has come under close scrutiny both from the globally oriented coalition of the large users, new entrants in the equipment industry, supported by neo-conservative or centre-right-wing governments. A policy debate was initiated to decide whether structural reform could meet both the demands of corporate users for efficient and adequate services, and the economy as a whole for highly advanced communications systems, while preserving the financial viability of the public operator and public service requirements at the same time. The large user groups, together with the computer and information industry, argued in favour of an organisational division between the operational activities of PTT (e.g. giro, mail and telecommunication) on the one hand and a separation between its operating and regulatory functions on the other (see figures 1.3 & 1.4). The relative strength of the international services-information coalition in different countries *vis-à-vis* the more or less powerful position of the national public monopoly regime, manifested by the distributional coalition of PTT, the government, political parties, trade unions and the domestic equipment industry, determined to a large extent whether deregulation,

liberalisation and privatisation measures were feasible and policy changes could be implemented.

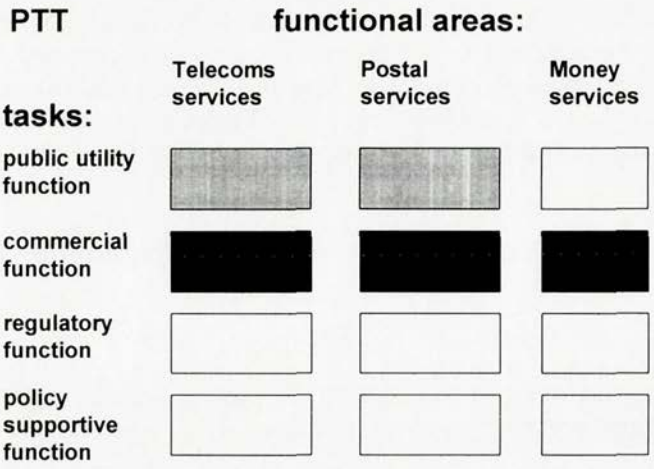

Figure 1.3: The Disentanglement of the PTT Functions and Responsibilities

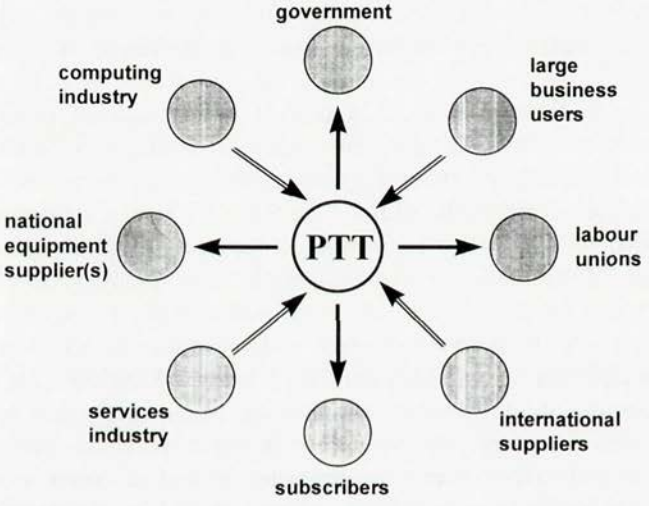

Figure 1.4: The Changing Industrial Organisation of Telecommunications

In some countries the information & services coalition was supported by *New Right* governments, that were sceptical about the degree and scope of state intervention in the national economy and sensitive to budgetary restraint and pro-market policies. The resurgence of the free market economy and the retreat of the government was first of all promoted by the neo-liberal Thatcher and Reagan Governments in the late 1970s, to be followed by the governments on the European Continent. The British and American governments, through the implementation of major deregulation and privatisation programmes, managed to improve the productivity and innovation of their domestic key industries, and hence their

international competitiveness. In Western Europe, however, privatisation and deregulation were not nearly as drastic nor on such an impressive scale as was the case in the UK and US, where these programmes had the strong ideological component of rolling back the frontiers of the state. In Western Europe privatisation was just one of the remedies for the problem of often inefficient and loss-making state enterprises and an appropriate way of financing the large-scale modernisation of the communications and distribution networks. European governments, however, decided to privatise only a few public enterprises and sell off minority shares of the public assets.

1.3 *Comparative Analysis of Telecommunications Restructuring in Western Europe*

The process of telecommunications restructuring in Western Europe is a complex phenomenon, taking place at four levels of analysis, namely the global, the European, the national, and the sectoral. The first two levels, making up the international political economy of telecommunications, set limits to while at the same time facilitating particular actions of national governments and sectoral actors. In this respect the following aspects are relevant to domestic policy making: the globalisation and differentiation of technology and markets, the activities of relevant non-European governments and businesses and the increasing jurisdiction of European Union institutions. Besides being constrained by techno-global developments, the formulation of appropriate national strategies is to some extent shaped by factors and actors at the macro-level of the national economy: e.g. a country's legal-administrative tradition, the scale and the degree of openness of the economy, particular arrangements linking the state with business and labour, and prevailing economic ideology. In addition to these national contingencies, policy responses are also influenced by constraints at the sectoral level, referring to the intrinsic features of the domestic telecommunications industry, like the power distribution between the incumbents and their political allies and (potential) new entrants seeking access to the market place and the policy arena. A multitude of governmental institutions, in collaboration with private stakeholders, are involved in producing programme outputs by enacting laws and mobilising public revenues and public employment. In recent political debate in the three chosen West European countries, the central issues seems to be whether and to what extent market monopolies should be liberalised and state control should be privatised and how a new appropriate framework for market regulation should be set up.

The shifts in the telecommunications polity, that took place in the 1970s and 1980s can be explained by referring to technological, economic, international, European and domestic-political factors. The first category of technological explanations includes the diffusion of new transmission alternatives, challenging the natural monopoly characteristics of the network, and the convergence of technologies, blurring the traditional boundaries between telecommunications and sectors like broadcasting, dataprocessing, and electronic publishing (Pool 1983,1990). The category of economic factors refers to the non-sustainability and inefficiencies of the

established market structure, leading to the introduction of more competition and the consequent promotion of innovation, quality of service and customer responsiveness by suppliers (Noam 1992; Mansell 1993). The third category of factors, threatening the domestic telecommunications monopoly, emphasises the internationalisation of business and politics, furthered by transnational users and early deregulating governments of the USA, the UK and Japan, and its impact on mercantilist policies in Western Europe (Noam 1992; Mansell 1993; Davies 1994). The fourth category refers to the ongoing process of European integration and the implementation of supranational telecommunications regulations, constraining the policy process in the constituting member states even more (Schneider & Werle 1991). The fifth category of domestic-political explanations focuses on the strength and interplay of stakeholders in the policy process and the legal-institutional setting that constrains their interplay in the formulation of an appropriate reaction to the ongoing restructuring in telecommunications. Technological revolution, expansion of communications markets, international deregulation and European integration, will be treated as structural environmental forces, that to varying degrees set the agenda in the domestic arena. The actual strategic response of particular countries in terms of degree and timing of implementing changes, as assumed in this report, will be shaped partly by the impact these structural trends have upon the ruling coalition and institutions at a national level. Besides meeting the new techno-economic and international conditions somehow, telecommunications policy and decision making reflects also the distribution of power among domestic stakeholders and their strategic interactions to shape appropriate institutional structures.

The first development that seriously questioned the state-controlled European telecommunications industry could be labelled *technological revolution*; computerisation and digitalisation have eroded the boundaries between technologies and industrial sectors and have allowed for the sharp rise in both quality and quantity of communications facilities. Innovations like micro-electronics, computers, radiowave, satellites, cable and videotechologies and their functional linkages have enabled a convergence between print, dataprocessing, broadcasting and telecommunications by integrating these formerly separated sectors in one integrated information/communications market. These developments have enabled a flexible and customised use of the telecommunications network by allowing to unbundle the distribution of information through infrastructure provision, bearer services and enhanced services. Information and communications technologies proved to be what Pool (1983,1990) has called *technologies of freedom* and *technologies without boundaries*, eroding the existing national monopolies and making communications almost insensitive to geographical distance. As a consequence of technological advancement and related changes in market and regulatory structure, the position of incumbents has eroded and new entrants have been encouraged to penetrate various segments of the telecommunications market. The diffusion of cable, satellite and radiowave technologies have offered new opportunities for outsiders to provide alternative networks and competitive products and services.

Besides technological imperatives, we also have to take into account changes in the economic structure of the telecommunications industry, like the development of

the information society and the service economy, the emergence of new markets, and the evolution of multimedia conglomerates. These developments have led to a proliferation of new value-added services and to the entry of private service providers, challenging the PTT monopoly. This diffusion of new technologies was stimulated by an increasing demand from large businesses for cheap and professional services, encouraging competition among equipment and service providers and the traditional operators even more. Together, these two developments have resulted in a considerable downfall of the information and communications costs. Large business users and private service providers have fiercely lobbied against the cross-subsidisation of tariffs, criticising poor performance of some of the public operators in favour of a more cost-related structure and a greater freedom to operate private (inter)national communications systems. The established administrative structure of mutual dependencies between PTT, government, domestic equipment industry, labour unions and households, was not really adapted to meet business demands for specialised, international and cheap communications services. These mutually beneficial relationships had led to major economic inefficiencies, like overpriced equipment, low quality levels, idiosyncratic standards, barriers to innovation, expensive long-distance tariffs, and only low levels of international trade. Telecommunications moved away, then, from being a stable and protected industry to an innovative high tech industry, where rising R&D costs and shortening production life cycles were demanding a more international outlook. The markets for equipment and services, once subject to national protection and market fragmentation, evolved into a global and oligopolistic affair, dominated by multinational corporations, like AT&T, Siemens, Alcatel, IBM, MCI, as well as the strategic alliances formed by the various European PTT's among their own ranks. This *globalisation and differentiation of communications markets* also made a reconsideration of the existing national policies necessary.

Another development that demanded such a reappraisal was the process of *international deregulation*, that in the US already had started in the early 1960s. In the early 1980s, these American deregulatory policies were emulated by ambitious privatisation and liberalisation programmes in the United Kingdom and Japan. The promotion of international deregulation also spilt over to discussions in the GATT-framework, where the early liberalisers sought to liberalise free trade in telecommunications equipment and services. The regulatory reform of US telecommunications implied a gradual relaxation of the entry conditions in specific market segments of the domestic industry (peripheral equipment, cellular radio and long distance telephony) to new businesses and an overall enlargement of discretion to market coordination and the curtailment of the regulated private monopoly. A landmark in American telecommunications deregulation was the Modified Final Judgement of 1984, that led to the divestiture of AT&T as a nationally regulated monopoly. AT&T was broken up into seven separate local/regional companies, the so-called Regional Bell Operating Companies (RBOCs) to be regulated by the government, and the slimmed down AT&T was freed from any regulatory impediments to enter new markets. As a consequence, competition was fostered

between the telecommunications and the dataprocessing industry and their major protagonists AT&T and IBM.

The deregulatory package was part of a deliberate American strategy to strengthen its global hegemony in information technology and telecommunications (Schiller 1982; Hills 1986; Pool 1990). Given their strong dependence on US technology and the large size of its market, European and Japanese policy makers had to take the American move to deregulate its domestic telecommunications and computing industries into account. First, the American programme served as an impetus and model for other countries also wanting to restructure their domestic telecommunications monopoly. Secondly, the global shift of AT&T and IBM exerted a strong pressure on the European and Japanese governments to open up -at least to some extent- their highly protectionist telecommunications markets. One of the consequences of US deregulation was that firms like AT&T, IBM, the RBOCs and MCI left their home base and sought market expansion abroad. When confronted with the US demand for market access, Japanese and European policy makers had to take into account the actual strength and the (potential) entry of and competition from large American firms in formulating an appropriate policy response to the new techno-economic developments. The strategic move of the US government to deregulate its telecommunications industry was quickly emulated by the Japanese and British governments, that decided to privatise their public operators and to a large extent liberalise their home market between 1980 and 1994. European states were more or less forced to respond and adjust their domestic public monopoly regime to the new conditions of the internationalising telecommunications industry. The position of European countries, however, has remained relatively weak: individual national markets are too small to compete with the US and Japan, nationally oriented operators and manufacturers are behind in transnationalisation, and the Common Market is not yet fully accomplished (Hulsink 1994).

Another main challenge for Western European states reducing the space for sovereign national policies is the *challenge of European integration*, illustrated by the growing power of EC-institutions in the design of Community-wide telecommunications and Internal Market policies. Although the European Commission could have intervened since 1962 when the rules of free movement became directly effective, there existed a consensus within the European Community to consider the telecommunications sector as subject to member states' control and organised through a state-controlled monopoly, with hardly any concern for domestic and international competition. The launching of the Internal Market programme in the mid-1980s was inspired by the premise that market integration, industrial restructuring and the upgrading of the Community's technological base would be the keys to catch up with Europe's major competitors, the US and Japan. The supremacy of Community Law over national legislation and the ongoing process of European integration has eroded the jurisdiction of the Community's member states to follow sovereign public policies (Volcansek 1992b). As a consequence, protective arrangements between any national government and its domestic industry were increasingly overruled by Community regulations to ensure the operation of free markets and to encourage national policy competition between the member states

(Jacquemin & Wright 1993; Sun & Pelkmans 1995). The growing importance of the European level in decision making is not only the result of the sheer increase of the responsibilities for Community institutions, but the *Brusselisation* of policy making has also fostered the formation and the participation of influential supranational interest groups in the policy process and the development of cross-national strategic alliances in the European market place.

For a long time the European Community hardly put any restrictions on the national design and adaptation in telecommunications policies. The picture changed, however, in the early 1980s when telecommunications deregulation in the UK forced the Commission to intervene to deal with attempts by British Telecom to abuse its monopoly power. With the publication of the Green Paper for European Telecommunications and subsequent legislation in the late 1980s, however, the leeway to develop specific domestic policies, reflecting particular ownership structures, domestic priorities and national legacies, has been narrowed. For instance, the Commission successfully attacked protective procurement policies of the member states and telecommunications lost its immunity from the anti-trust provisions of the EEC Treaty. The role of the European Commission has changed from being a mere international and collective regime, relying upon the consent of its constituencies, to that of a corporate actor in its own right, actively engaged in a comprehensive R&D framework, collective standardisation and the creation of a European telecommunications market (Schneider & Werle 1991; Hulsink 1994). Nevertheless the Community's efforts and relative successes to harmonise the various domestic policies and create a Common Market for terminal equipment, value added services, satellite & cellular communications and access to public networks by 1993, the existing public monopolies on infrastructure provision and basic services ('voice telephony') were not touched upon. Only recently, the European Council of Ministers decided that from 1998 the entire telecommunications sector will be open to competitive entry, including the aforementioned key markets.

So far the Commission has been relatively unsuccessful in forging a Community-wide consensus about the aims and scope of an adequate common strategy. The political responses to the economic recession and transnational pressures have remained biased in favour of the member states and domestic stakeholders. The reason for this lack of support can be traced back to a decision making structure in which the interests of the member states still prevail through the body of the Council of Ministers and so far little discretion has been given to the supranational bodies of the Commission and Parliament. EC-wide telecommunications policies can not be imposed upon its member states, but is jointly decided by the intergovernmental Council of Ministers. This body, in which national governments directly participate, offers the possibility either to further or block national interests. So basically, the policy outcome of this joint decision making in the European telecommunications domain is a political compromise of carefully manoeuvring between the Scylla of uncontrolled liberalisation leading to destructive competition and cuts in public service provision, and the Charibdis of too much state intervention, effectively blocking institutional change and innovation.

The nationally oriented telecommunications polity in Western Europe is challenged by the aforementioned four structural forces, pushing for change, away from the heavily protected and politicised monopoly framework of public service and universal access to an emerging new model in which there is more room for competition, foreign market participation and flexible regulation. The pursuit of national strategies, reflecting a country's unique set of political priorities, economic conditions and institutional heritage, has become contingent upon global techno-economic pressures and demands. Structural developments in technology, markets and regulation, however, do not automatically puts new institutional arrangements forward; a new industrial order needs to be negotiated, decided upon and implemented by national and sectoral actors. As argued by Blankart & Knieps (1989: 594): *'technical progress and efficiency arguments are a necessary but not sufficient reason to change the status quo towards deregulation.'* Instead of a cross-national convergence towards open markets and a level playing field, the outcome of this study might reflect some variety of policy measures to be implemented, like non-decision making in one country, incremental adjustments in another or policy innovations in a third country. These differences in policy response might be explained by examining the domestic priorities as defined and advocated by key actors and ruling coalitions in the policy arena and the larger national setting, made up of persistent rules and institutions, also shaping the process of telecommunications decision making in a particular way.

Since the 1970s, serious doubts have been cast upon the established telecommunications polity in all industrial democracies as a result of the impact of structural developments like technological innovations, differentiated demand for competitive, cost-based and specialised services, globalisation of business and international deregulation. To cope with these developments, several national strategies can be followed varying from mercantilism/protectionism, gradual institutional reform and modest liberalisation, to radical liberalisation/deregulation strategies. Together with the recent aspiration of harmonising and integrating national policies into the larger European Community, a question like 'whether the common challenge of techno-global telecommunications restructuring elicits different national responses' has moved to the forefront of political and academic debate. This research provides a comparative study of three different European responses to the common stimulus of structural changes in the telecommunications industry. We will examine how the United Kingdom, the Netherlands, France and (to some extent) the European Community as such, have adjusted to the new technological, economic, regulatory and international conditions of modern telecommunications. Do the aforementioned states have any manoeuvrability in the formulation of a national strategy with respect to telecommunications, reflecting domestic values and priorities? And if so, what explains the strategic choice made within a given country?

After these introductory statements the research question can be formulated as:

given that telecommunications is becoming increasingly global (due to technological revolution, globalisation and differentiation of communications markets, international deregulation, and European integration), is there any manoeuvrability left for European states in the adjustment of their domestic telecommunications polity, reflecting the different preferences, opportunities and restrictions of national actors and factors at the macro and industry level in these countries?

In strategic management and political economy, there is a lively debate about whether 'nations matter' in an internationalising political economy with respect to the public policy choices and private strategies pursued by leading domestic actors (e.g. Katzenstein 1985; Zysman 1983, 1994; Gourevitch 1986; Porter 1990; Ruigrok & Van Tulder 1995). For instance, Kogut has made clear that firms that want to survive in the global market place rely upon their own capabilities and the institutional strengths of their countries of origin: *"The study of international competition is, in large part, the study of comparative management and societal institutions among countries (Kogut 1991: 44)."* Researchers in comparative government-industry relations, however, disagree over the extent to which policy processes and outcomes are due to shaping factors unique to a particular policy field or whether they are a function of the political and social characteristics of the nation in which they are developed. Two different approaches to the comparison of public policies across nations and across sectors have been put forward (G. Freeman 1985; Feick 1992): the *cross-national convergence* or policy sector hypothesis stipulates a differentiation within individual countries across sectors and a convergence across nations within sectors, whereas the *national diversity thesis* stipulates a differentiation within individual sectors across nations and convergence across sectors. In this comparative strategy and policy study, we will apply the two theses to analyse two opposing trends in the high-tech industry of telecommunications, that seemingly pose a dilemma for both governments and (multi)national corporations, namely the choice between *techno-globalism* and *techno-nationalism* (Stevens 1990).

The convergence thesis assumes the appearance of similar problem definitions and the development of corresponding domestic policies across nations. These policies have proven or promise to be the most efficient, effective and/or legitimate. With the globalisation of particular industries and European integration, domestic politics have become more and more intertwined with international matters forging some kind of a convergence among national outlooks in coping with structural economic developments by transnational networking and global R&D/technology alliances, that go beyond national borders. The intensification of transnational economic linkages, manifested by the internationalisation of home-based firms and industries and the emergence of world-wide competition, has restricted the freedom of action for small and medium-sized states. Despite the impact of structural forces forging policy convergence, however, there still seems to be significant leeway for diversity in the strategies pursued by individual European states to cope with an increasingly complex and global environment (Dyson & Humphreys 1986,1990; Humphreys

1990; Grande & Schneider 1991). There are also arguments in favour of the national diversity hypothesis (or techno-nationalism), which claims that domestic politics and policies still matter, and that as a consequence there exist a number of diverging approaches to problem solving and decision making with distinctive routines, procedures and rules. The reason for the persistence of such a national policy style that is to be found in the fact that every country has a unique mix of economic, political, social and historical elements, that shape particular inherited patterns of interest intermediation and decision making.

1.4 *Global Forces and Domestic Responses: Convergence versus National Diversity?*

The Convergence Hypothesis

In the post-war period the level of economic and political interdependence between the economies of Japan, the USA and Western Europe has increased sharply. Today's companies, triggered by the search for economies of scale and scope, rising R&D costs and quickening pace of technological change and world-wide convergence of consumer preferences, are competing for world market shares and technological leadership. Although admittedly the notion of an open world economy is to a degree wishful thinking and one should not forget that the internationalisation of economic activities is still limited, the rise of powerful multinational companies, the increasing world-wide flows of goods, money and the formation of supranational trading zones and economic blocs all make it clear that things have changed (Ruigrok & Van Tulder 1995; Hirst & Thompson 1996). For instance, the globalisation of the automobiles, electronics, computing and aerospace sectors took place through the formation of foreign direct investment strategies and international strategic alliances: if one wants to operate a global business, one needs to cooperate with international partners to serve customers in a global environment. As argued forcefully by Ohmae (1985, 1991), every corporation that wants to have a strong position in the interlinked world economy needs to create a direct presence in each of the key markets. Transnational firms should be able to play this *triad power* game of penetrating and strengthening their position on the three regional markets of Japan, the USA and Europe simultaneously. A foothold in the regional market one wants to conquer, can be created by establishing joint ventures or mergers with enterprises from that region. With becoming an 'insider' in the host market, protectionist trade barriers and a foreign business environment are successfully enacted: European firms went transnational and have become insiders in Japan and the USA, and Japanese and American corporations on their turn have moved into Europe to become an insider in that part of the world market.

The international economic environment is not only shaped by increasing competition between multinational firms from the three leading regions and consequent concentration of production, trade and finance at world level, but also by the interactions between governments and (multi)national corporations concerning investments at home or abroad (Stopford & Strange 1991; Strange 1992). The process of world market integration has reduced the ability of national governments

to control and manage their domestic industries. In a global economy states can no longer follow costly and risky mercantilist strategies, exemplified by supporting national champions, protective trade barriers and massive government subsidies. Constrained by cuts in public spending and free trade provisions enacted through the EC and the GATT/WTO frameworks, governments keep an eye on the competitive position of their domestic industries, welcoming foreign investments in key economic sectors to strengthen their domestic techno-industrial base and hoping to find an attractive international partner for their national champions to enable access to foreign markets. For instance, in the heavily regulated markets (such as telecommunications, financial services and high technologies), it is almost impossible for foreign firms to enter those markets without joint ventures with domestic partners: market entry has to be negotiated. A clear free trade policy whereby foreign investors are welcomed without any local content provisions, however, is also not a viable alternative for local governments seeking to achieve durable economic wealth. In line with Lindblom's allegation on the privileged position of business, multinational companies always have the (potential) ability to invest and operate abroad to avoid high taxes and a burdensome regulatory environment (Lindblom 1977). Therefore governments have to find a balance between the restructuring of national champions and domestic industries and to promote free trade and market access for its domestic firms abroad.

This strategy of sequentially liberalising markets in order to give domestic firms sufficient time to adjust to the new conditions in international markets, is followed by a majority of nation states. The emerging global economy seems to be characterised by a system of free trade within the regions and managed trade between the regions ('quasi-trading blocks'), in which national governments or regional administrations are involved in setting the terms and conditions under which trade takes place (Ruigrok & Van Tulder 1995; Hirst & Thompson 1996). The present relationships between states and firms in the international political economy could be interpreted as a mixed-motive game in which rival states and rival firms attempt to strengthen their economic position in world-wide competition by relying upon a mixture of competitive and collaborative strategies (Stopford & Strange 1991; Strange 1992). This new game of competing for world market shares forces firms to bargain with host governments and/or other companies seeking access to new technologies and markets (Ostry 1990; Cowhey & Aronson 1993). Also national governments have to be alert and responsive by trying to attract foreign investments in key economic areas and support the domestic activities and the presence abroad of its 'home' multinational companies.

Although it has lost substantial market shares in some industries, like car manufacturing, steel and electronics and has lost monetary controls (Keohane 1984; Hart 1992), the United States is still the unquestioned *hegemon* of the world system (Strange 1987,1988). The control of US government and US business over key areas like security, economic production, finance, technology, transport & communications systems and energy supply (i.e the *Pax Americana*), has allowed for substantial bargaining power in determining the terms of individual international exchanges and the trade negotiations within the GATT framework in the post-war period (Vernon

1971; Gilpin 1975). The US strengthened its strategic position and created a competitive edge in the airline, finance and telecommunications sectors by being the first to deregulate and to demand a free trade regime in the 1970s and 1980s, based on the principles of market access, reciprocity, non-discrimination and the most-favoured nation principle applied multilaterally. This clear relationship between a country's positioning in the international division of labour (i.e. degree of international competitiveness) and particular trade policy preferences (i.e. degree of free trade) has been made clear by Gourevitch (1986: 56): *'Economic actors at the cutting edge of international competition are likely to support policies that promote open trading, not only for their own products, but more generally for intensified specialisation in international trade. Actors less well placed in international competition are more likely to support protection or modes of shelter or subsidy.'*

The increasing growth of economic interdependence at world level has been the outcome of major transnational corporations establishing subsidiaries, agreements and alliances all over the world. Especially big American firms like AT&T and IBM, relying upon a vast home market and tight links with the American defence industry through large procurement contracts, have become major players in global telecommunications. After the deregulation of their home market, these two leading American firms have acquired minority stakes in a number of European firms engaged in the communications and electronics industry. Compared to Japanese and especially European companies, there is the big difference in size of the companies, technology and market leadership, and the high level of transnationalisation. The American companies, encouraged and supported by a pro-market programme of its government, were at the forefront of the globalisation process in telecommunications. The US Government was the first to question the monopoly regime as well as the first to turn it into a market-oriented industry by loosening and lifting government regulations in order to stimulate innovation, competition and international trade. It was believed that such a deregulated regime would be beneficial not just for the American telecommunications industry, but for American business in general, operating all over the world. Given US world leadership in computing and telecommunications in the early 1980s, Japan and the EC had to react to this challenge. At that time the European Community was made up of small, fragmented and sheltered markets, which had become a handicap to innovation, growth and international competitiveness.

Although it's true that globalisation has to a large extent been accomplished by international firms, business was supported in their effort to *transnationalise* by international economic and political institutions operating at the regional or world level like the EC, and the multilateral arrangements established in the OECD and the GATT-context. These international institutions are highly involved in policy shaping and making concerning transnational competition, trade and innovation issues in either gathering data about these issues (OECD), enforcing a common European market (Commission) or facilitating world-wide trade (the GATT/WTO). EC law has an impact on both member states who are directly bound by it and on companies who are constrained by the competition provisions. The GATT/WTO framework is a forum for negotiation, that is becoming increasingly important for international

telecommunications. For a long time cross-border traffic was organised in a cartel-like way through various agreements between the national PTT's and decided by their exclusive ITU-federation. As it is losing its special public and monopolistic character, telecommunications is becoming more and more a normal industry like all the others, and potentially falling under the GATT-jurisdiction of world trade. In the Uruquay Round of GATT-negotiations a broader coverage of trade liberalisation was suggested, including barriers to international trade in services. Policy issues such as market access (e.g. standardisation and public procurement), and discussions are taking place to subject the international trade in telecommunications services to the free trade rules in the foreseeable future.

The National Diversity Hypothesis

The institutional environment of a particular country provides both constraints on and incentives for discretionary action in the formation and implementation of industrial policy and corporate behaviour. The term institutional contingencies refers to whether (and how) countries organise and regulate their domestic economy in a particular way, reflecting a unique mix of social, economic, political and historical elements: such as a specific production profile, distinctive domestic priorities and industrial culture, and the particular role(s) of the state and its interaction patterns with private actors (such as firms, financial institutions, trade associations, and labour unions) in the policy process. When a nation-state consistently shows a distinctive way of acting, structuring and performing in terms of policy making and/or implementation processes, influencing the development of public policies across time and across sectors, one could argue that a specific national policy style exists (Richardson *et al* 1982; Kelman 1981; Vogel 1986; Feick 1992). The concept of style has originally been defined by Gombrich (1979: 352) as *"any distinctive and therefore recognisable way in which an act is performed or an artefact made, or ought to be performed and made"*. In this research we will investigate whether there are diverging responses, based on particular national policy styles, to the techno-economic challenges posed by international telecommunications. When comparing public policies, we must include both the macro-economic and the legal-political environments, as they, too, constrain industrial behaviour.

A first difference in the comparison of national political economies is based on the country's comparative advantage based on natural resources, factor endowments (the level or amount of available skills, technology, capital), particular relationships among the nation's competitive industries, and various macro-economic variables (exchange rates, aggregate level of demand, the level of savings, interest rates and investment)(Shonfield 1965; Porter 1990). A second difference is the distinction based on the size and openness of the domestic economy (Katzenstein 1978,1985): the first element refers to the magnitude of the domestic market in terms of scale and scope economies and R&D efforts and the second refers to the relative weight of transnational actors, including multinational companies and international institutions on national policy formation. Some countries have a small and open economy (e.g. the Netherlands), other countries have a medium-sized economy with a relatively open (e.g. United Kingdom) or with a rather closed character (e.g. France). Others

still have a large economy which could be qualified as relatively open (USA) or closed (Japan). Compared with big economies, small industrialised countries have to rely upon niche strategies and exports to gain the benefits of economies of scale and recoup R&D costs. Because of their openness and small size, states like the Netherlands and Belgium are very sensitive to trends in world economy. To meet this high international sensitivity, the small European countries have developed a stable system of political accommodation at home, in which the major parties in economic policy (business, labour, government) work very much together in the formation and implementation of economic policies (Katzenstein 1985). Their innovation policies are oriented towards the diffusion and widespread application of advanced technologies, seeking to combine domestic capabilities with inward investment by foreign multinational firms (Freeman & Lundvall 1988). While smaller countries will conceive a structural industrial crisis as a cyclical occurrence generated from outside their economy and over which they have hardly any control, bigger countries could initiate mission-oriented innovation programmes on their own, aiming at technological leadership (space, semiconductors, aircraft manufacturing etc.), which might to some extent combat the crisis (Ergas 1984). While the large majority of the industrialised countries in the early 1980's were considering or already implementing privatisation and deregulation measures, for example the French socialist government nationalised the advanced sectors of its economy.

A third difference in the comparison of national economies has to do with the relative strength and the autonomy of the state *vis-à-vis* society. In explaining differences in international competitiveness between sectors and between countries, Hart (1992) has referred to the varying patterns in the creation and diffusion of new technologies, that are in turn affected by particular state-society arrangements. The distribution of power among state, business and organised labour and their specific interaction patterns helps to explain changes in international competitiveness, because these state-society arrangements could accelerate or impede the development and diffusion of technological innovations and breakthroughs that are crucial for a nation's competitiveness. Particular state-society relationships manifest themselves not only at the macro-level of economic policy making, but at the micro and meso-level as well. Individual businesses and industries are embedded in a complex network of distinctive relationships with central and local governments, national financial institutions and trade unions etc.; even multinational companies are strongly entrenched in specific networks of suppliers and supportive institutions in their home base (Porter 1990; Grabher 1993; Ruigrok & Van Tulder 1995; Hirst & Thompson 1996).

Zysman (1983, 1995) and Katzenstein (1985) have referred to the different ways the costs and benefits of industrial change can be distributed throughout society and the different means by which political settlements as to who wins and loses from growth can be reached. The Anglo-Saxon countries are characterised by a liberal tradition with business operating at arm's length from the state. The principal role for the government is to provide the appropriate economic conditions for domestic companies and markets to operate effectively. In these *market-led* or *company-led* countries the political settlement about the distribution of the costs and gains from

industrial growth is left to the market mechanism and competitive rivalry. The German, Swedish and Dutch states are examples of so-called *negotiation-led* or *neo-corporatist* systems with moderate government intervention, where the state and its 'social partners' (organised business, labour, the banking community and agriculture) collaborate intensively in order to secure domestic peace and develop a joint trade export policy. In these countries industrial adjustment is achieved through explicit bargaining and consensus building to make arrangements that will benefit all the domestic stakeholders as well as the national economy. France and Japan can be characterised by the leading role played by the central government in guiding and orchestrating the national economy. In these *dirigiste* or *state-led* countries, the distribution of costs and benefits of industrial change is imposed by political manipulation of the market. Through indicative planning, public ownership, investment subsidies and large public procurement programmes, industrial targeting policies, control over the financial system and superior expert knowledge, the state bureaucracy is able to develop and control effectively the crucial sectors and key technologies of the national economy.

The participation of industrialised countries in world markets and international economic rivalry constrains domestic decision making with regards to the formulation of appropriate industrial adjustment strategies and macro-economic policies. International developments, however, do not necessarily have a direct impact on national economies, but are reflected or refracted through policy choices, developed and negotiated by political actors and dominant organised interests at the national level. In his comparative study on the impact of international economic crises on domestic economic policy making, Gourevitch (1986) has distinguished five options to adapt domestic economic policies to the new techno-economic and political conditions in the world system: the neo-liberal market orientation, socialisation of planning and production, protectionism, demand management and mercantilism. These policy alternatives may prove useful to our study if we place them in-between free trade and mercantilism/nationalisation: the first assumes a subordination of politics to a dynamic market rationality generating economic efficiency and industrial innovation, the second assumes the supremacy of state intervention over market and political *grand design* strategies.

1.5 *Theoretical Concepts*

R.Scott (1992) has noticed a shift in organisation theory from interpreting organisations as closed rational systems in the 1950s and 1960s, to a conceptualisation of open and natural systems in the 1970s and 1980s. The closed model sees the organisation as a self-contained formalised collectivity oriented towards the pursuit of specific goals (e.g. performance, persistence/growth and legitimacy). The open model sees the organisation as a social system dependent on its environment for the gathering of information, the acquisition of resources, and the achievement of socio-political legitimacy. The environment has been acknowledged as an important factor in organisational design and functioning, with organisations shaping as well as being shaped by their environments. Dill (1958) has introduced the

term *task environment*, defining it as that part of the total environment that is of any relevance for the organisation in goal setting, goal achievement and day-to-day operations. The task environment refers to a system of interdependencies among competitors, suppliers, customers, and regulatory groups, who are all involved in the pooling of goods and services, the exchange of information, the granting of authority, and the carrying out of joint programmes. Evan (1976) has examined the organisation-environment nexus from the perspective of one specific organisation and its task environment by typifying the exchange relationships between the focal organisation and other institutions as an *organisation-set* in which each unit is involved in a configuration of roles and role relationships.

The organisation-environment nexus has been analysed in terms of (information) *uncertainty* and *resource dependencies* (Aldrich 1979; Van Den Bosch 1989; Pfeffer & Salancik 1978; Lawrence & Dyer 1983). In order to achieve their goals, organisations have to obtain and secure scarce resources from their environment, and in order to reduce goal ambiguity and information uncertainty, they need monitoring facilities to make sense of all the events taking place. Organisations need resources, and rely upon their environment for the availability and exchange of raw materials, goods, personnel, expertise, political access, and legitimation. They are also information-gathering systems, relying upon their environment for strategic information about competitors, customers, demand for products, availability of technologies, government regulations and the likes. So organisations attempt to accomplish their objectives and cope with the dynamics in their task environment by the acquisition, strategic (and tactical) use of resources in order to reduce and control their critical uncertainties and interdependencies with other organisations. Besides increasing their efficiency and effectiveness in economic production and exchange, organisations also seek political support and societal legitimation through developing representational capabilities and partnering skills (Galaskiewicz 1985). Organisations are located in an institutional environment, made up of values, shared cognitions, myths, persistent routines and rules (Powell & DiMaggio 1991; R.Scott 1992). Such an institutional framework constrains the strategic behaviour of organisations, but it also enables them to further their interests within the established rules of the game or to push for changes that are more beneficial to achieve their goals.

Organisation theorists belonging to the *contingency approach*, have referred to the strong correlation between the state of the environment, specific technical and production features, and particular organisational forms and related decision making styles (Burns & Stalker 1961; Lawrence & Lorsch 1967; Pennings 1992). They have argued that the effectiveness of corporate entities relies upon the congruence or *goodness of fit* between the organisation's structural design and the conditions of its techno-economic environment: a stable environment will encourage (more) centralised and programmed decision making in the organisation, whereas an unstable environment will demand (more) decentralised and non-programmed decision making. For instance, Burns & Stalker (1961) have illustrated that a business environment, characterised by a low or moderate rate of technological change and calm and steady demand/supply conditions ('the market conceived as a sink') will require routinised ('mechanistic') management systems; on the other

hand, a business environment with an accelerated rate of change and volatile market conditions ('the market conceived as a source') will require non-routinised ('organic') management structures. The importance of environmental imperatives acting upon and determining the organisation's internal functioning should not be overestimated, however. Besides affecting and constraining the focal organisation, however, the business environment also provides several opportunities to respond and even to anticipate the external constraints. There is some scope for strategic choices dealing with changes in organisational structuring, size and technology in order to create and enact a more predictable environment (Child 1972).

Chandler was one of the first to draw attention to the relationship between strategy formation and organisational structure with his famous dictum: structure follows strategy. Chandler (1962) has defined strategy as the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for realising these goals. Examples of corporate strategies are volume expansion, cost leadership, product differentiation, diversification, vertical/horizontal integration, and international expansion (Kay 1993). The implementation of a new strategy brings about administrative problems, however. In order to match the corporation's internal capabilities to the new strategic positioning, a reorganisation of its authority structure and division of labour might be necessary. Chandler's focus on corporate planning and strategic content was widened in the strategic management literature including also context and process elements, hereby referring to the distinctive capabilities and experiences of the focal organisation and the historical-institutional embeddedness of its business activities (Van Den Bosch 1993). The process of strategy formation, however, is more fragmented and complex, and the relationship between strategic choice and organisational design was less straightforward than Chandler had anticipated.[2] Pettigrew (1977) has suggested strategy formulation may be seen as a political process by which various constituents in the organisation bring forth disparate demands, mobilise support by seeking internal and external support for them, and have those dilemmas solved. Furthermore, the process of strategy formation is constrained by internal, historical and environmental contingencies, as pointed out by Pettigrew (1977: 79): '*Strategy may be understood as a flow of events, values, and actions running through a context. Part of the context is the location of strategy in time. Yesterday's strategies will provide some of the pathways to and inputs for today's strategies; and today's strategies will have a concept of the future built into them. The consequences of the implementation of today's will provide part of the context for tomorrow's strategies. But time is but a segment of the context: context also includes the culture of the organisation; its environment and the rate of change or stability thereof; the organisation's task, structure and technology; and the leadership and internal political system of the organisation.*'

2 Authors like March and Olsen (1989) and Mintzberg (1994) have referred to persistent routines, habits, learning curves, opportunism, social alignments, emergent strategy formation and the likes, all constraining strategic planning.

In organisation theory, organisations are treated as a set of relationships and relational contracts between a wide range of persons and parties in and around the firm, such as employers, such as employees, suppliers, customers, investors, shareholders, and government employees (Pfeffer & Salancik 1978; Kay 1993). In fact, organisations have multiple goals, and the goals of the organisation are the goals defined and held by dominant groups within it. March (1962) has suggested seeing the business firm as a political coalition of groups, in which dominant alliances between the various sub-units are formed. The setting of goals and the composition of the firm will be understood as the result of continuous bargaining between shifting coalitions of participants with diverging interests. These opportunistic coalitions of shifting participants define the mission and boundaries of the firm and hence it will pursue its goals through continuous learning and bargaining processes. In this negotiation process the company's executive plays the important role of political broker among the various participants by organising and forging the organisation's dominant coalition and managing the external dependencies of the firm. Especially when challenged by external events and structural changes in the environment, organisations have to cope with a divergence between their stated objectives (i.e. profits, public service and persistence), as furthered by their owners and managers, and the interests of employees and external constituencies, who wish to further their own interests (e.g. wages, job security, security of supplies, contribution to the local/national economy etc.). If no or inappropriate managerial action is undertaken to respond and solve these emergent internal conflicts, a situation, characterised by 'sustained low performance' and 'permanent failure' might be the result (Meyer & Zucker 1989).

A further elaboration on intra- and interorganisational behaviour in terms of shifting balances of power among coalitions of constituencies floating in and around the organisation, is the concept of *stakeholder*. The stakeholder concept refers to any actor or group of actors internal and external to the focal organisation that can affect or is affected by the achievements of the organisation; in other words, it refers to those persons and groups that have a stake in the focal organisation, based on ownership rights, socio-political claims or any other interest (Mitroff 1983; Ansoff 1987; Freeman 1984; Evan 1993). A stakeholder analysis attempts to identify who are the major and minor stakeholders, which of their interests are critical for the firm's functioning and how they affect and are affected by the focal organisation. Strategic management is modelled as the building of bridges between the firm and its stakeholders and effectively managing the relationships with employees, stockholders, management, suppliers, customers, banks, government, labour unions etc. The stakeholder approach promotes a broadening of organisational goals (efficiency, profit maximisation and survival) by including societal responsibility and balanced satisfaction of its internal participants, and further environmental demands as additional objectives for organisational effectiveness.

Corporations not only seek to search for cost efficiency and competitive advantages in the market place, but they also attempt to master techno-economic uncertainties, to control critical resource dependencies and influence public policy

making.[3] Pfeffer and Salancik (1978) have suggested that several strategies can be followed to make an uncertain environment more structured and predictable. The first cluster of strategies aims at altering organisational interdependence by internal growth, merging (horizontal and vertical integration) and diversification. These measures reduce a company's dependence on a particular set of other organisations by growing or acquiring competitors, suppliers or customers or altering interdependencies by diversifying into new activities. The second cluster of strategies stimulates the creation of a negotiated environment by establishing collective structures of interorganisational coordination such as normative adjustment, joint ventures, interlocking directorates, and organised coordination by the formation of associations, alliances and cartels. Yet another set of strategies aims at the stimulation of a 'created environment' by controlling interdependence through furthering one's interests and promoting appropriate legislation. In short, organisational decision makers are involved in minimising the dependence *on* other organisations and maximising the dependence *of* other organisations.

The emphasis on communications patterns and the exchange of resources among interdependent organisations in the study of interorganisational behaviour has resulted in the introduction and promotion of the catch-all concept of *networks*. From the late 1960s onwards, the focus in organisational analysis has shifted to the meso-level of more or less integrated systems of interdependent organisations that together were involved in accomplishing some common tasks in a specific interorganisational field, policy arena or industry. Warren (1967) has defined the multiple linkages among organisations in local community politics by the concept of *interorganisational field*. On the basis of five dimensions (relation to an inclusive goal, locus of decision making, locus of authority, degree of task differentiation, commitment to a leadership subsystem, and prescribed collectivity orientation), he has distinguished four different 'fields' or types of horizontal and (quasi-)vertical relationships between organisations: the unitary context, the federative context, the coalitional context, and the social choice context. Benson (1975) has argued that the actions and interactions of organisations in networks are aimed at the acquisition, control and defence of an adequate supply of resources within and outside the network. In his definition of an interorganisational network Benson (1982: 148) has stressed the importance of resource distribution and power dependencies within networks, describing a network as 'a complex of organisations connected to each other by resource dependencies and distinguished from other complexes by breaks in

3 Scholars working in the resource dependence tradition have conceptualised interdependencies among organisations in terms of exchange patterns and interorganisational linkages that determine an organisation's autonomy vis-à-vis its environment (Yuchtman & Seashore 1967; Pfeffer & Salancik 1978). They emphasise the relative power of organisations resulting from having control over resources such as information, assets, competencies and socio-political support, and the strategic actions taken to obtain control over scarce resources and manipulate critical external dependencies. Three patterns of organisational interdependencies can be distinguished: horizontal interdependence among identical organisations competing in the same markets and producing and distributing similar products and services, vertical interdependencies among organisations linked by sequential work flows and symbiotic interdependencies among organisations located in different but interrelated sectors with a complementary relationship in the production and provision of goods and services to customers (Pennings 1981).

the structure of resource dependencies.' The more centrally an organisation is located in resource flows, the stronger is its bargaining position vis-à-vis more peripheral organisations in the network, and the better it can force other organisations to accept its terms of trade, negotiation and dispute settlement. The power of organisations is not only dependent upon the control over vital resources and the relative position of an organisation in the network, but also depends upon their linkages with key actors in the network environment (international institutions, interpersonal networks, alternative suppliers, potential customers). The activation of these forces from outside the network may challenge the existing distribution of power and provoke a reshuffle of the various actor constellations in the network.

The network perspective, originally developed and applied by organisation theorists in their research on linkages among persons and organisations in socio-economic life, became also widely applied in public policy studies (Hanf & Scharpf 1978; Rhodes 1985,1990; Laumann & Knoke 1987; Marin & Mayntz 1992). The policy network perspective attempts to avoid the one-sidedness of overemphasising either the role of the state, corporations, labour or other stakeholders in the policy process and claims to leave sufficient room for both autonomous discretion of strategic orientations and the collective dynamics of intended and non-intended interactions between public and private stakeholders. Katzenstein (1978) has introduced the policy networks concept in the field of political economy by referring to the interorganisational linkages between the public and private sector in the formation and implementation of economic policy. The policy network concept was further elaborated and applied in empirical studies analysing and comparing the strategic interaction and exchange patterns between state agencies, business and labour, across different nations, across different industries and across time (Wilks and Wright 1987). Hanf and Scharpf (1978) have argued that the structure of the policy network and the characteristics of the policies shaped in that network should be mutually contingent; in other words there has to be some goodness of fit between the traits of the network and the policies to be developed and carried out. Two analytically different categories of policy systems can be distinguished: tightly integrated iron triangles and open pluralist (issue) networks (Heclo 1978; Jordan 1981,1990). *Iron triangles* are exclusive policy networks, characterised by stable membership, a small number of participants, strong structural dependencies between the major stakeholders, shared values and highly concentrated decision making. Examples of such integrated associational systems are neo-corporatist regimes in macro-economic policy making, the traditional regulation of network industries and the close links between European government and their national champions. The opposite category of *issue networks* is characterised by open access, a large number of participants, fluid participation with weak dependencies and with a low level of shared values and dispersed powers. Examples of such pluralist networks can be found in Anglo-Saxon politics, where policy making occurs in a rather ad hoc way, shaped by explicit political lobbying and the formation of temporary and opportunistic coalitions pushing for or forming blocks against particular issues.

Strategic policy-making will be analysed from a *power perspective*, characterised by a focus on the resource dependencies among stakeholders and the strategic

interactions and negotiations between public and private actors in the policy arena (Crozier & Friedberg 1977; Olsen 1981; Wassenberg 1985). The traditional top down approach of state-guidance, characterised by hierarchical or monocentric control and unilateral governance structures in the key sectors of European economic life, is gradually being replaced by horizontal coordination in more open and polycentric systems. The complexity of contemporary societal problems, the rising expectations, the degree and intensity of group participation and the blurring of the boundaries between the public and the private sector have resulted in overloaded governments and crowded political arenas (Jordan 1981,1990). The collectivities of government and industry have become increasingly decentralised and segmented into various configurations of actors, all sharing an active interest in the promotion of certain issues and the realisation of joint programmes. The formation and implementation of public policies have become increasingly complex, involving a large number and wide variety of interdependent actors from different functional areas and layers of society. The lack of authoritative control has fostered a certain shift of political power from the political centre to specialised sub-governments and semi-independent policy networks. States have become dependent on the active involvement of private actors and public policies are increasingly the outcome of political exchanges and negotiations among governmental agencies, business, labour and other stakeholders. This move towards a disaggregated and more segmented way of policy making puts an extra emphasis on the negotiations between government agencies and societal stakeholders in multiple policy networks and public and private actors acting in conjunction (e.g. co-production, co-steering, co-regulation)(Kooiman 1993).

It is in the political system and the market place that interdependent actors seek to enhance their effectiveness, and it is there that the struggle for control of the terms of resource exchanges and the pursuit of dominance take place. Each actor seeks to reduce environmental uncertainty and control critical resources by aiming to govern directly or indirectly the other actors involved and thus escape the constraints that others would impose on him. In their effort to control interdependencies and overall uncertainty, organisations can follow several strategies to achieve a relatively steady state of *social closure*, varying between collaboration, conflict seeking, competition, secretive manipulation and overt integration (Murphy 1988). Cawson *et al.*(1990) have suggested that organisations can follow at least three strategies to safeguard a solid power base and achieve some state of closure in the market place and/or the policy arena: a market-orientated strategy aimed at strengthening its competitive position vis-à-vis other competitors, cartel-orientated strategies promoting associative action to guarantee monopolised advantages for the members of the in-group, and state-orientated strategies demanding protection and shelter from the state. Lukes (1979) has discerned three dimensions of power: the pluralist notion of power covering the behavioural analysis of overt and observable decision making by political actors (i.e. the execution of force), the revisionist view defining power in terms of control over the political agenda and the mobilisation of bias in the political system (i.e. the manipulation of decisions and non-decisions), and the radical perspective conceiving power as working through the suppression of latent conflicts and the shaping of consensual authority (i.e. power or domination as a legitimate

system property). So anyone wanting to analyse institutional change from a power perspective should also pay close attention to overt decision making and hidden control over the political agenda, taking into account both the subjective and concealed interests of the parties involved. Furthermore, one should pay attention to both actual and potential issues, as well as any observable, repressed and latent conflicts between stakeholders in the policy process.

In analysing the acquisition and exchange of critical resources and the mutual search for external control by organisations, we have to ask in what way these transaction and interaction patterns are governed. As made clear by Hage & Clignet (1982) and Williamson (1993), economic production and distribution processes are contingent upon an institutional environment, made up of relatively stable and persistent state-society relations and socio-legal ground rules. Because different types of business have different requirements with regards to governing transactions and interaction patterns, there does not exists a single and optimal way to organise particular industries or public programmes and to maximise their economic performance. The concept of *governance structure* has been put forward to refer to alternative institutional arrangements that control the processes of production, resource allocation and decision making in a specific industry. Or stated differently, governance structures are ideal-typical organisational forms that coordinate and control economic (or political) activity and transactions among interdependent organisations within a particular domain. Five *institutional forms* can be distinguished (Williamson 1975,1985,1991; Streeck & Schmitter 1985; Powell 1990; Lindberg *et al.* 1991; Hollingworth *et al.* 1994):

- market forms based on bilateral exchange, classical contracting, price coordination and incentive-intensity;
- hierarchy: based on administrative command, authority relations and legitimate powers (e.g. horizontal and/or vertically integration; state intervention);
- obligational networks: based on resource dependencies, partnering, relational contracting and contractual bonds;
- promotional networks: based on group loyalty, socialisation, joint interests, mutual trust and confidence relations;
- association: based on membership agreements, recognition by the state and intermediation.

Markets are self-regulating exchange systems in which buying and selling takes place in a competitive bidding process between atomised utility maximisers. The market process is governed by the price mechanism, that reveals more or less adequate information in the allocation of goods between buyers and sellers. Market forms coordinate economic transactions between private actors, holding separate property rights in the different resources to be bartered, actors that are voluntarily engaged in the contractual exchange of goods and services. Hierarchies are administrative systems that coordinate economic activities by fiat, centralised controls, and formal procedures. In this institutional form the property rights are

vested in one integrated formal organisation to which both supervisor and subordinates belong. The exercise of managerial prerogatives by one category of actors to wield authority over others through hierarchy is often explained by the uncertainty and frequency of transactions and the need to address the hazards of opportunism, free riding problems and secure task-specific knowledge and skills (i.e. asset specificity). The network form could be located in between bilateral market or contractual resolutions and administrative hierarchical control as some kind of an intermediate or hybrid form. In this horizontal and multilateral governance structure economic activities are conducted by reciprocal communications and exchange patterns and a strong value consensus. The network lacks a formal authority structure and decision making relies upon a mixture of mutual adjustment, negotiation and arbitration (or mediated enforcement). Obligational networks maintain control through corporate interlocks between a core firm and its satellites or between two firms of equal size through equity-sharing arrangements, joint ventures and quasi-vertical structures, like long-term subcontracting, franchise arrangements and corporate transfer pricing. Promotional networks are temporary coalition or clans, established to accomplish a common purpose, such as R&D alliances and bidding consortia. Associations promote the establishment of a representative monopoly among specific categories of actors in identical, similar or adjacent market positions or policy domains and the organised concertation of individual actors in the policy process. These collective organisations mobilise sectoral or collective interests and organise and enforce cooperative behaviour among their members in order to define and further public or categorical goods (e.g. sector-wide training, standardisation). Besides sectoral inclusion and internal coherence, associations derive their political and economic powers from recognition by the state as the single interlocutor, acting on behalf of one particular sector or category of interests in the policy process.

A *governance regime* is the totality of institutional arrangements, including rules as well as rule-making agents, that regulate economic activities and transactions inside and across the boundaries of an economic system at certain moments in time (Hollingsworth *et al.* 1994; Lindberg *et al.* 1991). Economic action and coordination is shaped, not just by markets, corporate hierarchies and control over the means of production, but also by a wide range of non-economic institutions that create and maintain the minimal conditions without which economic exchange and organisation would not be possible. Economic institutions are embedded in and modified by a social and political institutional context, including shared cultural beliefs, interdependent networks, systems of interest representation and the degree and mode of state intervention, that create pressures for economic change or preserve the existing situation (Granovetter 1985; Zukin & DiMaggio 1990). While private property rights, free market exchanges and the overall efficiency imperatives to integrate economic activities within managerial hierarchies make up the common elements of capitalism as an economic system, social and political institutions contribute to the differences among capitalist economies. For the comparative analysis of the social, political and economic determinants of managerial organisation and market behaviour, the concept of the *business system* has been suggested. In his definition of a business system, Whitley (1993,1994) has referred to

a relatively stable and cohesive configuration of firm-market relations that have become institutionalised within a particular sectoral or national setting. Several distinctive elements have been suggested in the empirical research on business systems, such as the nature of the firm (e.g. the role of firms in the economy, particular corporate and business development strategies), ownership and management patterns, authoritative coordination and control systems within firms (e.g. degree of specialisation, decentralisation, formalisation of control etc.), the organisation of the market (e.g. trust and loyalty relations, different forms of business organisation etc.), collective institutions in capital provision and labour market domains, together with the overall system of property rights and political control.

The state plays a special role in shaping the actions and transaction of private actors and the stipulation and enforcement of governance structures. Government are both actors (or a configuration of actors) pursuing goals of their own, a political arena where deliberation and struggles over power take place, and institutional structures in which economic transactions are embedded (Lindberg & Campbell 1991; Hollingsworth *et al.* 1994). The state is a political and economic player acting in its own right, relying upon hierarchical control and authoritarian command on the basis of its unique coercive capacity to provide, enforce and adjust the laws and traditions in society. The state is exclusively authorised to define and manipulate the rules that determine the conditions of ownership and control over the means of production in society, to enforce contracts, and to set general rules of competition associated with the coordination of economic activities. The state is prominent in the organisation of political participation at both the sectoral and national levels by providing diverse economic actors and various societal groups differentiated access to the economic policy making process. Last but not least, the state also provides the legal-institutional framework by shaping the strategic choices and relative opportunities of economic actors and their exchange patterns. Governments legitimises particular industrial structures by defining not only the relationships of economic actors to property, but they also settle the wider institutional basis of economic production, allocation, and accumulation within the national economy.

In its broadest sense, *regulation* refers to government intervention and control over specific markets and industries, channelling and directing economic activities generally regarded as desirable to society (Reagan 1987). The purpose of overall regulation is to facilitate and to accomplish the realisation of socio-economic goals like allocative efficiency and economic growth, price stability, employment and the provision of public goods by shaping the structural characteristics of an industry. The justification for administrative regulation has to do with market imperfections, that produce sub-optimal outcomes in terms of efficiency (e.g. natural monopolies, externalities, excessive competition, and information asymmetry) and - to some extent - equity (e.g. universal service provision). Anti-trust regulation aims at encouraging competition and curtailing the influence of monopolies, cartels and other restrictive business practices, that might disturb the proper functioning of markets. Economic regulation refers to the imposition of controls over prices, entry, exit, output, services rendered, markets served and profitability in particular industries. Social regulation deals with the protection of the environment, consumer protection,

occupational health and safety etc. Regulation can be interpreted as an informal system of rule-making, which operates though negotiation and bargaining between politicians, civil servants, industry, consumers and administrative bodies in the shadow of the law (Hancher & Moran 1989; Veljanovski 1991). Such a regulatory framework of organisations includes vertical relationships (e.g. goal setting, licensing, performance control, mandatory reporting, sanctions) and horizontal relationships (e.g. competition, cooperation, conflict, accommodation).

Regulation may be organised in a variety of ways: from self-regulation through self-imposed codes of conduct for a specific industry or profession to externally imposed regulation whereby public organisations have legitimate coercive responsibilities in regulatory policy making. Two variations of externally imposed regulation may be discerned: public monopoly and public regulation. The first one works through direct public intervention whereby a state enterprise has the exclusive responsibility for the provision of particular services. Here the government controls the operational and strategic activities of the state enterprise, such as capital allocations, investment plans, pricing and personnel policy. Public ownership is a means to deal with the natural monopoly conditions described above and the (actual or potential) abuse of private monopoly power. It could also be conceived as a means of dealing with socio-economic problems that cause the market to function badly or not at all: national security, externalities, universal service provision, industrial adjustment and restructuring, regional development and/or ideological concerns. The second form works through administrative agencies that enjoy a considerable degree of independence from the industry (and sometimes from government as well) in regulating a particular market. The role of a regulatory agency is restricted to that of referee in charge of general oversight and legal enforcement, reflecting a more judicial relationship between the state and the private sector (Volcansek 1992a; Majone 1994 a,b). Public regulation refers to a package of legislative and administrative controls designed to structure and alter politically the operation of particular markets of basic importance to the national economy through an independent regulatory authority, while leaving private property intact. Reagan (1987) has characterised public regulation as a half way house between government intervention and *laissez faire*, with markets being organised by the stipulation of entry and ownership conditions and control of market behaviour through rules on price setting, fair competition, and universal service requirements.

1.6 *Explaining Governance Transformation: An Institutional Perspective*

The institutional approach chosen in this study acknowledges both the moves of actors driven by calculated self-interest, the collective dynamics of strategic interactions between the major stakeholders in the policy network, and the environmental conditions that constrain the search for more appropriate governing structures. The process of strategy formation and policy making can be typified as an overall game of antagonistic cooperation embedded within specific 'structured fields of action', which includes various multi-level and mixed sub-games, nested games and multiple ties among numerous interdependent government and industrial

stakeholders (Crozier & Friedberg 1977; Wassenberg 1985,1990; Tsebelis 1990). The strategies of the various actors and the interactions between them to (re)shape the negotiated order, are the central elements in such an approach. Wassenberg (1991: 183) has defined negotiation as *'a process of potentially opportunistic transactions by which two or more parties (organisations, groups and institutions) with partly conflicting interests try to reach a more satisfactory result, by coordinating their behaviour, than they might have done otherwise.'* Negotiation behaviour is aimed at the scope of the mutual dependence of the actors involved, by recognising the ambitions, plans and interests of their allies and adversaries, and the support or opposition from the various stakeholders with regards to a change in public policy.

The negotiation perspective attempts to make clear that the availability of blueprints is no guarantee for the effective development of policies, but that basically, policy and strategy are the outcome of bargaining within and between mutually dependent organisations. In that respect, the disposal of discretionary power for the players involved is crucial: whether the possessor of power is able to change the range of options open to others without apparently putting direct pressure on them to take one decision or to make one choice rather than another. Schattschneider (1975) has argued that one should not only pay attention to the final outcomes of decision making, but also take into account how subjects and proposals emerge in the first place and eventually get sufficient political attention and support. His emphasis is on the variation and selection mechanisms inherent in the political process: out of the various conflicts that do arise, only a few are filtered out by the interplay of dominant stakeholders, and finally generalised to the broader public. Some (potential) issues, values and participants are not considered seriously or even excluded, and kept out of the public domain. So the scope for conflict and available alternatives is continuously being redefined and re-arranged by the organised interests involved in the policy process: *"All forms of political organisation have a bias in favour of the exploitation of some kinds of conflict and the suppression of others because organisation is the mobilisation of bias. Some issues are organised into politics while others are organised out."(Schattschneider 1975: 69)* So changes in policy making and the duration and pace to implement them are the result of power shifts in the policy arena and/or changes in the composition of the political agenda, prioritising some issues and excluding others (Wassenberg 1985).

In a democratic society, politics is a constant search for compromises and bargaining. It basically takes the form of a tug-of-war to persuade those in a position to make the formal allocation of values. The making of industrial regulation also involves values, interests, conflicts and having choices to be made by responsible politicians, administrators and other stakeholders. This means that in analysing industrial policy, in addition to technological and economic factors, a political rationality has to be considered (Reagan 1987). By looking at industrial policy from a political point of view, the emphasis lies on reiterative processes of bargaining and compromise-seeking by and through organisations, and on the way in which powerful state and non-state organisations gain, maintain and sometimes lose their dominant positions. The strategic choice between different governance modes of industry can

be seen as a strategic game in which interests and values of the involved parties play a vital part and the political-economic organisation of society is at stake. Regulated firms and industries, public agencies and other actors operate within the political and administrative process in exactly the same way they operate in the market (Owen and Braeutigam 1978; Vietor 1989,1994). Public or private companies that want to operate effectively in a regulatory environment must be active both in the market place and the political arena and complement their business plans with political action. The larger business environment provides opportunities for strategic and tactical behaviour: the realisation of economic objectives and innovation could be used as an offensive instrument, whereas the gathering of information, cooptation of experts, lobbying, cross-subsidisation and litigation are illustrations of more defensive means to strengthen one's position. Established parties and prospective entrants alike make extensive strategic use of information in the administrative process, taking virtually every opportunity to make detailed economic and technical information available and understandable in ways which emphasise the strong points in their cases and diminish or at least obscure the weaker points. The affected parties in regulatory policy making can also respond by resorting to delaying tactics: for instance, by flooding the regulatory agency with more information than it can absorb. The responsibility of regulators is to sift through the information received and differentiate between arguments that reflect only special interests and those that support the public interest (as perceived by the policy makers).

The negotiation perspective provides a lucid process-oriented outlook on public policy making and strategic interactions among public and private actors. The theory disregards, however, the persistent influence of institutional arrangements, that constrain the bargaining process. The term 'institutions' is used in a rather general sense in this study, referring to a relatively persistent set of rules, norms and values that structure the economic and political exchanges between stakeholders. From the 1970s onwards, the academic interest in the study of economic, political and legal institutions has increased. New Institutional Economics and New Institutionalism in sociology and political science have started to conceptualise and investigate institutions as organisational forms, socially constructed and routinely reproduced rule systems, and particular state-society arrangements that structure politics, respectively. According to the New Institutional Economics (NIE), institutions can be seen as being incentive and governance structures designed by rational actors to respond to economic needs by reducing transaction costs and information uncertainty (Williamson 1975,1985,1991; North 1990). The emergence, functioning and transformation of institutions is explained with the help of micro-economics, with the focus on the rational choice for the most efficient outcome and the incentives and benefits associated with particular institutional structures. For instance, the transaction costs associated with hierarchical forms tends to be lower than the costs of market coordination under conditions of high frequency, high asset specificity and high uncertainty. The underlying assumptions of NIE, i.e. the primacy of economic goals, the rational actor in pursuit of self-interest and the emergence of institutions as efficient responses to external requirements have been strongly criticised by the institutionalist approaches, as developed in sociology and political science.

According to the New Economic Sociology, institutions are shared cognitions and socially constructed rule systems by agents whose actions are embedded in concrete networks of social relations (Powell & DiMaggio 1991; Granovetter 1985,1992). Besides pursuing the goal of economic efficiency, actors strive for non-economic objectives as well, such as power, dominance, status and public recognition. The development and transformation of both political and economic institutions is contingent upon lasting interaction patterns and shared norms as well as the constraints imposed by the historical background of institutional settings and the overall structure of society. In the political science domain, institutions refer to *'formal rules, compliance procedures, and standard operating practices that structure the relationships in various units of the polity and economy'*(P.Hall 1986: 19). Central in this respect is the notion of the institution as a set of rules affecting the structure of particular situations at various levels and in particular ways by requiring particular actions, prohibiting certain other outcomes and/or allowing others (Ostrom 1986). In the political version of institutionalism, it is assumed that the socio-economic organisation of a country both conditions and reflects the distribution of power among the key stakeholders affected by particular state-society arrangements and policy outcomes (March & Olsen 1989). Specific institutional arrangements shape particular kinds of politics by affecting the way an actor defines his own interests as well as the degree of power that any set of agents has over policy outcomes. These institutions have evolved out of previous situations and rule-settings in which human actors found themselves and that have caused policy makers to take certain courses of action. Given that each alternative course of action tends to favour the interests of particular stakeholders over others, the parties involved will bargain about certain institutions and policy outcomes to further their interest. So agents will actively attempt to further their interests and particular policy outcomes while at the same time they are subject to institutional structures, that set limitations to their operations and interactions.

Governance transformations are the outcome of the dynamic interplay between actors, private and public, either in favour of change or eager to preserve the *status quo,* and the larger technological, economic, cultural and political context, constraining their strategic behaviour. In the explanation of why governance regimes emerge, persist or change, Campbell & Lindberg (1991) have suggested five possible factors: the search for economic efficiency; innovation and technological developments; the quest for power and control; the impact of cultural beliefs; and the role of the state in promoting or foreclosing particular courses of action. The first factor pressing for governance transformation, economic efficiency, relies upon rational actors trying to find more efficient and/or effective ways of doing business. Consequently, economic actors will probably select those governance structures they believe will reduce transaction costs and improve economies of scale and scope. The factor technology provides new opportunities for governance transformation by expanding the range of choices to innovate production, restructure product markets and facilitate new entry for outsiders. Besides the continuous search for economic efficiency and innovation, one has to include the importance of power struggles and the pursuit of control over technology, critical dependencies and market competition

in maintaining or challenging established governance structures. Actors are also concerned with safeguarding their private interests, balancing the power relations with their stakeholders and controlling the terms under which these transactions and economic activities take place. Culture also plays a role in the occurrence and transformation of economic governance, although its explanatory power is limited. Cultural and ideological factors constrain the range of available governance mechanisms from which actors might choose by inhibiting or facilitating particular coordination mechanism that fit within the encompassing system of beliefs, norms and values of a particular sector. The role of the state in structuring and transforming industries is more complex. State actors shape the selection of governance regimes by defining and enforcing the property rights within the national economy and they determine the conditions under which each of the governance arrangements may exist. The government devises policies that prohibit certain courses of action, promote institutional change and certain kinds of behaviour through incentives, and legitimise and enforce the (newly established) governance regime.

In explaining policy change, shifts in power dependencies between stakeholders in the policy network and the larger governance regime play a dominant role, but one should not underestimate the significance of new persuasive ideas, intellectual debates and prior experiences with related policies in the political process. Social scientists are seemingly more interested in the 'political' aspects of the policy process, referring to elements as power struggles, bargaining and conflict resolution, and neglecting such cognitive and argumentative aspects, like problem solving, advocacy, communication, deliberation, persuasion and learning. Ideas, being a propelling force in the search and implementation of new solutions to collective societal problems, will be seen as an equally relevant explanation for the development of public policy (P.Hall 1989,1993; Majone 1989a, 1992). P.Hall (1993) has distinguished between three forms of change in policy content: first-order change, caused by incremental and routinised decision making regarding socio-economic problems; second-order change, caused by altering the instruments without challenging the overarching hierarchy of objectives behind the policy and third order change referring to a new coherent set of ideas, that redefine the persistent problem and its possible solutions anew. Elaborating upon the distinction between normal science and scientific revolution as put forward by Kuhn (1970), P.Hall considers first and second order change as manifestations of normal incremental problem solving and third-order change as a paradigm shift, provoked by an accumulation of policy failures that trigger the promotion and discussion of new conceptions and institutional structures.

The extent to which these alternatives become widely accepted and implemented depends on their techno-economic, political and administrative viability and the support they receive from communities of experts, leading socio-economic groups, politicians, and administrators (P.Hall 1986,1989; Rose 1993). March (1989) and Kingdon (1984) have referred to the linkage of four largely independent streams, namely the flows of the energy from participants, problem recognition, available alternatives and choice opportunities, that all together makes policy breakthroughs possible. Derthick and Quirk (1985) have described the drastic changes in US regulatory policy on transport, airlines and telecommunications, that were the result

of a shift in the dominant interests and a surge of conceptual innovation generating new arguments, evidence and proposals. Originally, the policy alternative of regulatory reform was developed by economic experts advocating deregulation as a way to cut back often unnecessary forms of regulation and hence to reduce social costs. These intellectual suggestions for pro-competition policies were picked up and supported by leading politicians responsive to public concerns about high levels of inflation and government intervention and/or inclined to free market ideologies. Although hindered by a relatively late and ineffective reaction from the affected industries to protect their vested interests and slow down far-reaching reform measures, entrepreneurial office holders, commissions and advisory working groups further advanced the ideas for deregulation and eventually implemented them.

We will follow an evolutionary theory of institutional change, that emphasises both rational variation and (re)adaptation, and the constrained selection of appropriate forms and the elimination of all the others (Aldrich 1979; Nelson & Winter 1982; DiMaggio & Powell 1983; Campbell & Lindberg 1991). The mechanism of variation refers to the more or less intentional motivations and cumulative search efforts of actors to improve their capabilities and strategic position. The strategic responses of organisations to transform governance regimes more favourable to their interests, are triggered by changes in their techno-economic or political environment. The selection mechanism refers to the filtering process of how better-fit forms are picked out by the environment and less-fit forms are replaced or rejected. The mechanism of structural adaptation refers to the incremental choices made by policy makers aimed at reforming and adapting institutional structures in response to environmental changes, threats and opportunities. Those particular forms are selected out, that are effectively pursued by powerful actors and are best suited to the changing environmental conditions. The shape organisational forms eventually take is the outcome of a step-by-step process of trial-and-error learning, adaptation and persuasion.

The more or less intended variation process is seriously constrained by strong inertial forces like established routines and experiences, shared values and regulations and other initial properties of organisations, that set strong limits to organisational adaptability (Hannan & Freeman 1984). Organisations confronted with high levels of uncertainty, resource scarcity and constraints, often follow 'best practice patterns' and 'survival paths' by borrowing or emulating structural forms of relevant other organisations. DiMaggio and Powell (1983) have emphasised that organisational fields are continuously being (re)shaped by environmental developments and ultimately stabilise through the emergence of institutional forms that are the most compatible with their environmental characteristics and requirements. Organisations and institutions may, deliberately or necessarily, model themselves on similar organisations and institutions, that they perceive as more successful or legitimate. They may adopt a form, that has shown to be efficacious in another context, or be forced to emulate a powerful organisational form in a neighbouring field. The mechanism of imitation refers to the availability of blue prints that could function in cases of high uncertainty and ambiguity as exemplars of problem-solutions in the reform of organisational and institutional forms at hand.

Majone (1990) and Rose (1993) have pointed out that policy makers, operating under tight resource and time constraints, often rely on pre-existing models from politically and economically powerful countries instead of developing new frameworks. Given the inevitable differences in cultural, economic and social settings foreign institutional forms are of course never exactly and directly implemented, but only imitated partially with some minor adaptations and adjustments to fit with the local circumstances.

The thrust of the evolutionary approach is that environments select only those policy ideas and forms that fit within a predefined configuration of interests, and filter out those that are maladapted to meet the demands of the political and economic environment. The selection process within the environment is conditioned by historical contingencies, including the legacy of past policy choices, existing ideas, and long-term commitments and current practices. As argued by North (1990: vii), the continuity of history and institutional persistence often act as a constraint on the ability of organisations to respond to changes in its environment: *"History matters. It matters not just because we can learn from the past, but because the present and the future are connected to the past by the continuity of a society's institutions. Today's and tomorrow's choices are shaped by the past. And the past can only be made intelligible as a story of institutional evolution."* So policy responds less directly to the current social and economic conditions than it does to the consequences of previous initiatives: 'policy makers are inheritors before they are choosers (Rose 1993: 78)'. This *path dependent* behaviour is inspired by the fact that an alteration of rules and practices usually involve high switching costs and impair learning effects and adaptive expectations; instead yesterday's experiences will provide the opportunity set for today's actors and organisations (Arthur 1989; North 1990). Institutional settings, however, may temporarily shield an organisation or an industry from selection pressures. Organisations will then seek to buffer their technical core and interests from environmental disturbances through the pursuit of various closure strategies, aimed at reducing or suppressing competition and technical innovation.

In this institutional analysis of the restructuring in European telecommunications, we investigate the occurrence of similar and different policy responses over time and across countries. The underlying assumption is that nation-specific adjustment trajectories are shaped through the search strategies of domestic actors, enduring government-business patterns and external contingencies that narrow the range of policy choices (Zysman 1995). A comparative-historical approach is, according to Chandler (1990: 10), essential for the evaluation of industrial and institutional transformation across nations, sectors and over time: *"Because there were such major differences among industries, nations, and time periods, historical evidence can easily be found to support almost any set of hypotheses, propositions, or other generalisations concerning the growth and evolution of industries and enterprises. To be valid, historical analyses must be comparative. They must compare the histories of enterprises within the same industry, and then they must compare the collective history of the enterprises within that particular industry with that of other industries in the same nation and also with that of the same industry in other nations.*

Only such broad-based data can provide the comparisons that indicate common patterns of institutional growth and reveal the impact of cultural, economic, and historical differences on institutional evolution. Such comparisons, in turn, provide the underpinnings for a systematic analysis of the dynamics of modern industrial capitalism."

1.7 *Comparing Telecommunications Governance Regimes Across Nations and Across Time: A Research Framework*

The process of economic adjustment in the European telecommunications industry manifested itself in the early 1980s, when European policy makers started to realise that the challenge posed by structural developments in technology, markets and international regulation, together with Europe's lacking competitiveness in high tech industries *vis-à-vis* the USA and Japan, required an appropriate policy response. Although the structural imperatives that challenged the established order were roughly alike in most industrialised democracies, the political strategies followed in Western Europe exhibited diverging responses varying from country to country and differing over time. In his research on comparing telecommunications policies in France, Britain and Germany, Duch (1991) has referred to the differences in political institutions and configurations of interests supporting or opposing structural reform measures, that affect policy outcomes. The performance of state-owned telecommunications companies will not necessarily result in economic inefficiency, according to Duch, but the performance will be influenced by the extent to which government oversees and controls the management of these public or private companies. This negative relationship between government oversight and effectiveness is manifested through political pressures and constraints on borrowing, tariff setting, investment decisions and personnel policy. So telecommunications companies with more financial autonomy and greater managerial discretion will perform better than those subject to far-reaching political controls.

Duch (1991) has explained the degree of implementing privatisation and liberalisation policies by referring to the distinct national institutional frameworks, that initiate, guide or block change. A pluralist framework, as it exists in the UK, is characterised by a moderate protection of the incumbent's vested interests and a relatively easy access for new entrants, and the advocation of policy innovations. Such a system provides a government with the flexibility to rely upon 'winner takes it all' practices, in which minimal winning coalitions carry out controversial liberalisation and privatisation programmes. In a corporatist framework like Germany, the degree of access to the political process is low and policy innovations are accomplished only gradually in an incremental search for inclusive coalitions and consensus on the crucial issues. The privileged established parties will resist any institutional change. A statist regime, like in France reveals a mixed picture, in which access to the political process is difficult, but there is also less protection for established interests. Here state officials clearly dominate the policy process by managing economic policy and -whenever necessary- initiating and guiding liberalisation or privatisation programmes. Once the government decides to act, few

barriers hinder the implementation of these policies. The interests of domestic manufacturers, consumers and labour unions often appear to be of minor interest in such a case.

Duch concludes that pluralist institutions are the most conducive to privatisation and liberalisation programmes. These systems, exhibiting elements of a political market place, provide the entry possibilities and the channels for relative outsiders with narrow economic interests to put their demand for more competition forward and challenge established organised interests and patterns. Corporatist institutions are the least responsive to new entry and drastic policy changes, because these systems have a systemic bias towards the entrenched interests of the incumbents, excluding newly emerging political forces. Within corporatist systems there is a general preference for stability, incremental change and society-wide consensus-seeking on controversial issues. Statist frameworks are strongly dominated by government agencies and technocrats that are relatively insulated from society. These private forces do not have the channels to put their political demands forward effectively. Once the government has decided to promote and commit itself to far-reaching policy changes, however, the opposition from these groups is only little, dispersed and uncoordinated. In such a situation the government is capable of implementing these structural reform measures quite rapidly and effectively.[4]

Although we will to some extent follow Duch's political-institutional analysis, his approach in explaining policy change is too narrow in that it by overemphasises the role of governments (i.e. electoral shifts, cabinets and public administration) and broader political-administrative frameworks as ultimately initiating (or blocking) the implementation of restructuring programmes. The particular roles of the key player in the policy process, the (former) PTT administration, but also the European Commission and other stakeholders, like organised interests of large users, consumers, equipment manufacturers and foreign companies, are largely left out of his research. In our study we will focus on the roles of semi-public and private stakeholders and industrial groups pursuing their corporate objectives both in the market place and the policy arena, and the constraints that the established institutional framework lays on their political and economic behaviour. In addition to underestimating corporate strategies and the power of interest groups, as well as dynamics of public-private policy negotiations, Duch fails to take into account the revolutionary shift in the governance regime of the telecommunications industry, that takes place with the implementation of privatisation and liberalisation programmes and replacing traditional state intervention and public monopolies.

The aim of this study is to compare and explain telecommunications restructuring as it took place in three countries over a period of time. The period of study will

4 Blankart & Knieps (1989) have also referred to diverging institutions of political decision making to explain different paths of telecommunication deregulation. In comparing the pro-competition policies of the US and Germany in the 1980s, they refer to the differences in the interest group structure and access to the political system. While the US exhibits a more decentralised and pluralist structure of decision making at both the federal and state level, German decision making in telecommunication is centralised at the federal level. According to Blankart & Knieps, these institutional differences between the US and Germany explain why the former followed a far more radical strategy than the latter.

include 1980-1994 and the countries to be investigated are the United Kingdom, the Netherlands and France. These states have been selected on their distinct patterns of government action to stimulate the pace of technological and economic development in telecommunications. In analysing the process of states adjusting their domestic industrial structure to the changes in world economy in previous research, three national strategies have been distinguished: company- or market-led adjustment, state-led adjustment, and negotiation-led (or corporatist) adjustment (Zysman 1983,1994; Katzenstein 1985). The UK approach in restructuring domestic telecommunications could be considered an example of the first strategy, as it relies on an extended role of market forces in the domestic and international economy, with a modest regulatory role for the central government. The French approach is an example of the second strategy, emphasising far-reaching state intervention and political manipulation of the key markets of the national economy. The Dutch approach could be regarded as a manifestation of the third strategy, depicting explicit bargaining and consensus seeking among all the stakeholders involved, as to which adjustment policy to follow.

In the comparison of economic development and the diffusion of organisational patterns and technologies, economists, historians and sociologists have referred to the uneven and jumpy character of industrial development between corporations, industries and nation states. Research into the 'order of entry effect' has compared the efforts of pioneers and the alleged competitive advantages of first movers in a large number of industries with those of later entrants or free riders and the economic rewards generated by imitation and inspiration (i.e. risk aversion, cost efficiency, better equipped to benefit from shift in technology and market demand and society-wide diffusion). For instance Schumpeter (1947) has made an analytical distinction between a creative response outside the existing practice and an adaptive response within the existing practice: the former includes the *'doing of new things'* and the latter includes *the 'doing of things that are already being done in a new way* (p.151)'. Chandler (1990) has accentuated the decisive role of first mover advantages and its accelerating effects upon economic leadership for pioneers. Early starters and innovators are in the position to acquire and establish a powerful competitive position versus (potential) challengers: here the premiums are associated with leadership and there are penalties for those who lag behind and miss opportunities. Lieberman & Montgomery (1988) mention the following first mover advantages: the (potential) strategic use of patents and proprietary standards to reinforce market dominance, exploitation of the cost advantages of scale and scope economies, and overall learning/experience effects in all the functional activities of management (e.g. production, distribution, R&D etc.).

Other scholars have referred to the disadvantages of industrial leadership, and the potentials associated with later entry, imitation, free riding, rational shopping and targeting (Gerschenkron 1962; Romein 1971; Abramovitz 1986; Schnaars 1994). They illuminate the stagnating and retarding effects of industrial and technological leadership on pioneers and innovating states, and the long-term benefits of *catching up* and *leapfrogging* over early starters by late developers. The premiums for being behind economically are generated by the possibility of borrowing technology and

learning about new policy programmes and institutional forms from the former innovators (Rose (1993). Innovating and taking the lead are risky and costly roads to a firm's or nation's success. At first innovations are designed poorly and ill-adapted to their ultimate application, and first-movers have to be wary of the risk of eventually being locked out by large up-front investments and skills and experiences acquired in first generation technologies, as the next generation of technologies arrives. Imitation is less expensive than innovation, because free riders and followers may learn from mistakes made by the pioneer, and borrow his technologies to modify and improve them. Furthermore, later entrants might benefit from the slow resolution of uncertainty (i.e. access to newer technologies, emergent customer needs) and to focus on the diffusion and marketing of the innovation.

In this study we will examine whether there exist clear differences in the style, the degree and the timing of strategic responses of national governments and other stakeholders to adjust their domestic industry to the new techno-economic and international conditions in telecommunications. To investigate the various strategic responses to persistent structural forces, we distinguish three *independent variables* at different levels of analysis:

- (X 1) an extra-national variable: includes the aforementioned four structural forces that effectively challenge the established telecommunications regime in the countries under investigation in this study. *(1) Technological (r)evolution, (2) globalisation and differentiation of markets, (3) international deregulation, and (4) European integration* are treated as exogenous variables. These structural forces serve as an impetus for the restructuring of telecommunications and set the agenda for the debate in the three political arenas in Western Europe to be analysed;
- (X 2) the sectoral regime variable: refers to a distinctive framework of government-business relations and institutions at industry or meso-level, and includes dominant ideas, ruling actors and dominant coalitions, as well as the prevailing governance structures that make up the political and economic configuration of the telecommunications sector of one particular country;
- (X 3) the national context variable: determines whether states exhibit a unique mix of socio-political, economic and historical elements, making up a distinctive framework of incentives and constraints for policy making. Three national institutional settings are distinguished: a liberal regime (UK), a negotiated or corporatist regime (NL) and a statist regime (F). This national context variable will be elaborated in chapter 2, where an extended framework is presented. On the basis of Gourevitch (1986), a further distinction will be made between the particular production profile, the role of the state in the economy, the system of interest intermediation, the dominant economic approach (or ideology), and the positioning of the country in the international political economy. Together, these national variables make up the extended national context variable (X3').

The *dependent variable* (Y) in this research is the pace and timing of change in British, French and Dutch telecommunications policy (see figure 1.5). The time frame of this study is set between 1980, when state monopolies were still (largely) intact in France, the Netherlands, and the UK, till 1994, when all the three countries had restructured their telecommunications sectors. The yardstick for comparison will be the timing and degree of implementing the new governance regime that succeeds the traditional public monopoly model. The negotiation process and policy development over time are being investigated: were there any radical breakthroughs or incremental adjustments of the existing policies and how did these major and/or minor changes take place? Interviews with officials, consultation of experts, official policy documents, position papers of (private) stakeholders, annual reports, background studies, etc., provided the data and insides for this study (see appendix). Pace and timing refer to the implementation of decisions concerning the liberalisation of the telecommunications market, the privatisation of the public operator, and regulatory reform to ensure public service provision and fair competition.

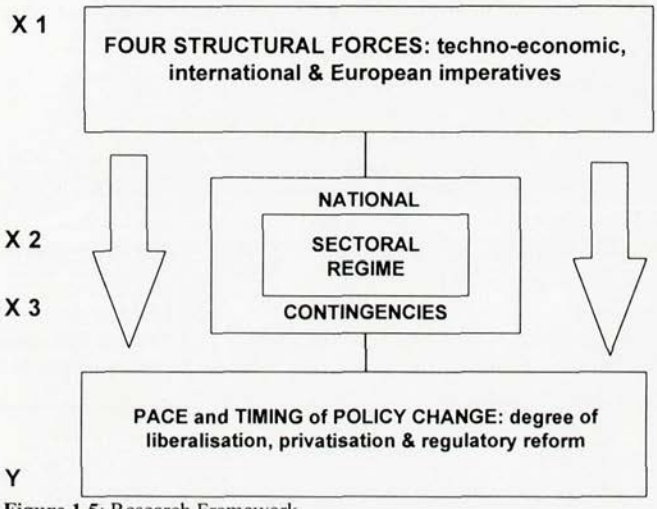

Figure 1.5: Research Framework

After this introductory chapter, we will provide an elaborate discussion of the various approaches in the field of comparative government-industry relations and economic policy making. Chapter 3 will give an overview of the techno-economic and international forces in the telecommunications industry and changing it from a national public monopoly into one that fosters new entry and innovation, the privatisation of PTTs, deregulation/regulatory reform framework, and the creation of international strategic alliances between telecommunications companies. The chapters 4, 5 and 6 contain the case studies on the restructuring of the British, Dutch and French telecommunications industries and provide the deliberations, actual developments and experiences with de-monopolisation in these countries will be discussed. The degree and timing of the implementation of liberalisation, privatisation and regulatory reform measures in the United Kingdom, the Netherlands and France will be offered in chapter 7. After this comparative institutional analysis on the decisive actors, factors and

institutional contingencies in the three national settings being investigated, some final concluding remarks will be given in chapter 8 (see figure 1.6 for the structure of the study).

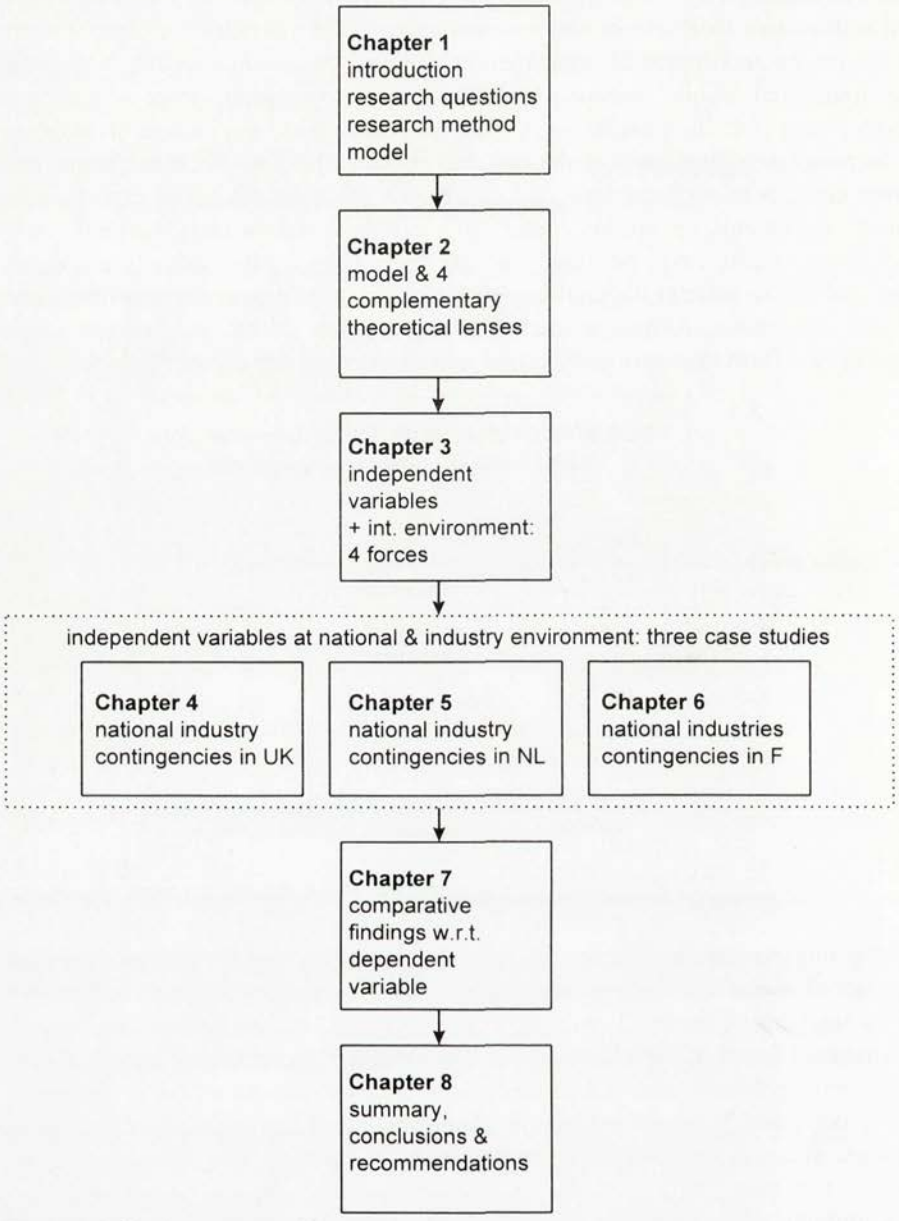

Figure 1.6: for the structure of the study

2

International Restructuring and National Contingencies: Comparing Government-Industry Relations and Economic Policy Responses

2.1 *Introduction*

The starting point for a large research project on Comparative Government-Industry Relations (CGIR), sponsored by the British Economic and Social Science Research Council in the late 1980s and early 1990s, was that it should include both the national variation in patterns of government-industry relations and the differences between industrial sectors and subsectors (Wilks and Wright 1987a). The project coordinators Wilks & Wright (1987b: 290) defined their central research question as *'whether government-industry relations vary more significantly or consistently between sectors than between nations'*. This perspective questions whether policies determine politics or vice versa; this question which lies at the heart of political science, has so far, according to Wilks and Wright (1987b: 290), never received serious attention: *"It remains an open but important question whether government-industry relationships may vary more significantly or consistently between sectors than between nations. That certain sector-specific characteristics do recur consistently across a range of national settings is clear. Whether such sectoral characteristics are more significant than variations in national characteristics is an empirical unresolved question."* Cross-national and cross-sectoral policy studies contribute to the academic debate on the validity of (national and sectoral) diversity versus international convergence in policy development: in other words, public policies might differ across nations, across policy sectors and even over time or they might become more similar in the end. However, so far there have been only a few systematic and analytically sound attempts at comparing policy sectors across different nation states and/or comparing functionally different policy areas cross-nationally. According to Heidenheimer *et al.*(1990), this is due to the fact that comparative policy studies still lack a systematic and analytically well-considered approach and it is difficult to find truly comparable measurements of the same phenomenon in different countries.

The aim of this study is to point out in what way three West European countries have responded to changes in technologies, demand, and the international political economy of telecommunications, and whether the various national adjustment strategies differed or converged. The comparative study of policy responses in five countries to international economic crises, by Gourevitch (1986), offers an integrative framework that allows us to examine the manoeuvrability of the sovereign

British, Dutch and French states to adjust the domestic industrial structure in response to or anticipating international and techno-economic restructuring. Gourevitch (1986) has divided the responses to international crises into five categories: (neo-)liberalism, socialisation of ownership and planning, protectionism, demand stimulus and mercantilism. The neo-liberal alternative shows an unshakeable faith in market forces in yielding the greatest output and wealth for a society; the task of the government in such a liberal view is to allow the market to function wherever possible and to provide at the most the basic collective goods, necessary for the market to function optimally. The second policy alternative represents the opposite view of liberalism in claiming that a free market is far from ideal, leads to negative externalities, irrationalities and neglects basic social values. As a remedy this policy choice advocates replacing market forces and private ownership by a state-controlled economy, exemplified by public ownership and economic planning. The policy of protectionism, next to the value of efficiency, also gives priority to the political value of economic nationalism (national power and security). In this alternative it is argued that in order to guarantee a gradual economic development (for a certain period) protection from international market forces is needed through tariff barriers and import quotas. The fourth choice of demand management proposes that the problem of a stagnating economy has nothing to do with lack of capital, but with lacking demand. The demand for goods can be stimulated by income redistribution and public spending (welfare/employment programs, public goods). Mercantilism is a more drastic version of the protectionist alternative; it assumes that for some basic economic tasks domestic market forces must not only be sheltered from external forces, but explicitly supported and guided by a pro-active state. Illustrations of mercantilist measures are subsidies and tax breaks for individual firms, sponsored research programs, public procurement and selective targeting.

The three international crises in the world economy (the 1873-96 downturn, the Depression between 1929-49, and the recent depression 1971 to the mid-1980s), Gourevitch discusses, have brought about profound institutional changes in the countries included in this study, namely the USA, UK, France, Germany and Sweden. After the first crisis period (1873-96) the relationships between state and society became more organised; intermediate associations, representing the interests of social groups were formed and emerged on the political stage. The second crisis (1929-49) led to the establishment of a social pact between state, capital and labour; the idea of the mixed economy was put forward in which private enterprise remained the pivot of the economy, but became embedded in a system of rules providing both economic and political stability (demand management, full employment policy, the welfare state, and institutionalised industrial relations). The economic crisis between 1972 and the mid 1980s effectively questioned the mixed economy model and the alliance which had formed the historic compromise came under pressure. Neo-liberals sought to cut government expenditures and roll back the power of the state, while the French socialist Mitterand government at first followed the opposite path with an impressive nationalisation programme and a mercantilist economic policy. However, when confronted with the negative results of its policy, the Mitterand government had to revise and moderate its economic policies. In short, according to

Gourevitch (1986), industrialised democracies are subjected to the pressures of an interdependent world economy, but they still have (some) freedom to set their own national priorities. A crisis in the world economy and a consequent international restructuring, presses these countries to adjust their domestic economic responses to this disruption in the international economy in some consonant way.

This chapter provides an overview of various theories and concepts that deal with the convergence-divergence debate in comparative strategy and policy studies. In section 2.2 we will discuss the policy styles approach, as furthered in comparative public policy studies. The concept of national policy styles refers to certain distinctive forms of decision making, which are typical of the national system at large; this would suggest that, industrial policy making is, for example, shaped by certain specific forms of decision making typical for the national political system. The concept of sectoral policy styles refers to certain characteristics, which are typical of a policy sector as such and which would follow its own policy pattern across national boundaries. This would mean that industrial development follows the same pattern across national boundaries. In comparing policy outcomes and structural change between countries, we should pay attention to the historical, organisational and institutional characteristics of those economies. In section 2.3. we will discuss the contributions from comparative political economy. Here, two sets of distinctions are relevant: the different structural adjustment strategies of countries (i.e. market-led, statist-led and a negotiated-led approach) and the distinction between techno-nationalism and techno-globalism. In section 2.4 we will elaborate on the research model, as introduced in chapter 1, by discussing the five national variables suggested by Gourevitch (1986), that shape and constrain a country's response to telecommunications restructuring, namely production profile, the role of the state, system of interest intermediation, economic ideology and culture, and the position in the international political economy.

2.2 *Comparative Policy Studies: The Policy Styles Approach*

Comparative policy scientists deal with the subject matter of how different government agencies, interest associations of organised business and labour, individual firms and other actors, such as banks and consumer representatives, act and interact with each other in the formation and implementation of public policies. The comparative public policy approach has been defined by Heidenheimer *et al.*(1990: 3) as '*the study of how, why, and to what effect different governments pursue particular courses of action and inaction*'. The aim of this approach is to find answers to the three questions posed in this definition. The first question *how public policies (do not) differ* focuses on how different governments deal with certain problems, within which institutional framework they operate and with which configuration of actors (e.g. regulatory agencies, interest groups, individual companies etc.) they actually interact, trying to solve these problems. The question *why public policies (do not) differ* pays attention to the constraints and determinants in the policy process: policy choices can be shaped by the ideas policy makers put forward, power dependencies in the political systems and intensive lobbying by

interest groups. The question of *what are the consequences of government (in)action* concentrates on the evaluation of the chosen policies and the assessment of the government capacity to cope with problems. Public policies can be seen as a series of (non)decisions that add up to a fairly consistent body of courses of (in)action, sanctioned by government authority. This question deals with the pay off of certain policies. Sometimes the objectives of governments are achieved, or when the results are disappointing, political debate starts anew in order to adapt objectives in order to be more successful, or the chosen policies give way to externalities and side effects. The *to what effect* question is related to implementation and evaluation analysis, referring to the appraisal by the major stakeholders, the media and the general public of the effects policies have in practice.

The comparative public policy approach has its origins in the discipline of comparative politics with its focus on the role and organisation of distinctive political and administrative institutions across nations. Here one can think of the study of cabinets, parliaments, political parties, public bureaucracy, courts of law (e.g. Lane & Ersson 1991). An illustration of cross-national research conducted within this tradition is Lijphart's comparative study on the political systems of the major long-standing democracies in the world. Lijphart (1984) systematically compared the (degree of) concentration of the executive power (cabinet), the composition of the legislative (parliament) and the relations between them, the party and electoral system, and the organisation of central-local relations. He divided the various democratic regimes into two basic models: majoritarian democracies like the UK and New Zealand (and France to some extent), correlating with homogeneous societies, and consensus democracies like Belgium, Switzerland, and the Netherlands, correlating with pluralist societies.

A further theoretical contribution to the comparative public policy perspective was made by Richardson *et alia* in the policy styles approach with its focus on the central characteristics of the way societies formulate their public policies. Richardson *et al* (1982: 13) have defined national policy styles as *'the interaction between the government's approach to problem solving and the relationship between government and the other actors in the policy process.'* In a series of national case studies, the researchers have made an attempt to classify European countries, according to their standard operating procedures for reaching decisions (Richardson 1982). Although they admit that in every country a variety of styles can be found, Richardson *et alia* have made clear that certain dominant national styles could be identified.

Richardson *et al.*(1982) have identified two primary factors in their typology of policy styles: the nature of the government's approach to problem solving and the nature of societal governance. The combination of these two factors has made a categorisation of societies into four basic policy styles possible (see figure 2.1). The first deals with a government's approach to policy change in terms of either an anticipatory/active attitude towards problem solving favouring radical change or an essentially reactive approach to problem solving promoting incremental change. The anticipatory approach can be qualified as being active and assertive: a central authority with a high coercion ability, clear objectives for the future, limited conflict

over values, wide search for the options and possibilities of radical change options. The reactive approach can be qualified as piecemeal (or incrementalist), and is characterised by a conflict over values, analysis at the margins, emphasis on consultation and mutual adjustment, successive limited comparisons, low coercion and managerial change. The second factor is related to the relationship of the government with other actors in the policy process. The relevant question here is on the relationship between governments and interest groups: is the government eager to reach a consensus with organised groups by way of accommodation or is it more inclined towards imposing decisions, notwithstanding opposition from groups?

Some societies are located in category I, in that they emphasise consensus and show a reactive attitude to problem solving (Richardson 1982; Richardson *et al.* 1982). Germany and the Netherlands exhibit a reactive policy style, following international developments and emphasising consensus. Other countries appear to be located in category II: they have also stressed consensus, but with normative values, emphasising an anticipatory or active approach to problem solving. Sweden and Japan can be seen as representatives of this policy style, combining an anticipatory style towards policy innovation with a heavy emphasis on the need to reach consensus. Other nations, belonging in category III, are seemingly less concerned with consensus, but see the role of the state as active and willing to impose policy change in the face of opposition from organised interests. France would appear much more inclined towards an active policy style in which the state often takes the lead in carrying out reform programmes. Category IV is where governments are increasingly reactive in their approach to problem solving and, yet, if any policy change is to be achieved, it has to be enforced against the resistance of at least some organised groups. The United Kingdom may be characterised as having a distinctive policy style, placing great emphasis on confrontation in the context of a very reactive approach to problem solving.

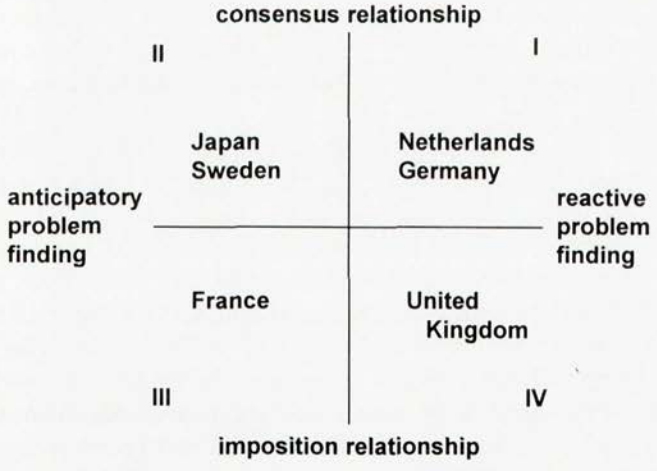

Figure 2.1: Different Policy Styles, Source: Richardson *et al.* 1982: 13.

Adopting the framework described above, Premfors (1981), in his comparative study on higher education policies, has investigated whether policy making in France, Sweden and the United Kingdom fitted the national policy styles of these countries. Premfors found striking differences in the policy styles of France, the United Kingdom and Sweden, and identified a strong fit between higher education policies and the existence of national policy styles. The British style of policy making was characterised by moderate policy changes, decentralised policy making, regulated consultation, secrecy, relative absence of forethought and a low conflict level. The French style of policy making combines by occasionally radical policy change, highly centralised policy making, limited consultation, secrecy, a high conflict level and deliberation. The Swedish style of policy making was characterised by radical changes in policy, centralisation, extensive consultation, openness, deliberation, and a low conflict level.

In his cross-national study of occupational health and safety policy in Sweden and the United States, Kelman (1981) has pointed out that differences in national styles left a much sharper imprint on rule-implementation than on rule-making. Despite major differences between the relative strength of business and labour in the US and Sweden and the presence of diverging political cultures (Sweden: social-democratic, the USA: liberal-conservative) Kelman found that the goals and content of regulatory control were rather similar in the two countries. The decisions taken by the Swedish agency for occupational health and safety ASV and its American equivalent OSHA were quite alike; only a few differences existed in the stringency of the regulations. Kelman discovered, however, that there were major differences in the ability of governmental agencies, labour and business in the two countries to reach joint agreements regarding the content of regulations and in their enforcement. The assumptions, operating styles and organisational environment of the ASV-agency reflected the values and institutions of the Swedish *overhet tradition* (the Continental state-society conception) (Dyson 1980). The OSHA-agency revealed the American liberal tradition (the state-less society conception) with its more adversarial and legalistic system of government-industry relations. The Swedish enforcement system was characterised by the presence of dominant normative inducements, informality, searching for compromises and mutual adjustment. This facilitated the development of political institutions that fostered accommodation among the contending groups, bringing the representatives of the conflicting parties together into a small forum for negotiations. In this limited and informal setting, mutual adjustment between the stakeholders is encouraged and joint agreements might be worked out. In the US, the implementation of regulations for occupational health and safety takes place in a system, characterised by formality, antagonism, and the use of court trials and public hearings. The American political system tends to be poor at solving conflicts, because of the strength of self-assertive values and the tendency to use adversary institutions. There is a tendency to let the parties fight it out among themselves and if the opposing parties do not reach an agreement, a neutral third party is empowered to decide for them; this gives the courts more power than in any other Western European country. The adversary proceedings for a specific policy sector or policy aspect are imposed by independent regulatory agencies, which are in charge of rule-

making, rule implementation and enforcement. In contrast with Sweden, where policy making takes place informally in small groups behind closed doors, the making, implementation and enforcement of rules in the USA is open to public participation.

At first sight the Swedish system tends to be good at solving conflicts: the deferent values and small group negotiations in accommodationist institutions promote broadmindedness and collaboration in a way that the US system cannot. In the US the presence of self-assertive values hinders the solution of difficult social conflicts and the use of adversary trials does little to encourage agreement; in the words of Kelman (1981:232): *'parties speak to a judge rather than to each other'* . Only a part of all the disputes, however, can be solved in court and another problem of using legal enforcement to induce compliance is that judicial punishments produce resentment. The Swedish system has certain shortcomings too (Kelman 1981). The presence and use of normative inducements and accommodation are not always sufficient to influence actors and enforce decisions, sometimes compliance has to be legally enforced. The Swedish system provides considerably less data and information to central decision makers than the American one. The Swedish system of normative values and accommodation favours the search for consensus and compromise; this generates policy alternatives which are politically feasible and acceptable to all the stakeholders involved. The system of accommodation lacks the opportunity and incentive for the interested parties to articulate their views one-sidedly and explicitly. The American system of adversary proceedings provides more information and evidence to central decision makers. In front of an arbitrator, investigating the dispute, each party has an incentive to find as many facts to back his case as possible. Another disadvantage of the Swedish system is that the interests of parties who do no like the terms on which the agreement is reached, are inadequately represented; the US political-administrative system is much more accessible to (relative) outsiders. To sum up, the content of regulation and the actual decisions taken were quite similar in Sweden and the USA. A major difference, however, did exist in the enforcement of these regulations. The ability of the regulatory agencies, labour and business to reach joint agreements over the content of regulations and to enforce these regulations is embedded in national political culture.

A further elaboration of Kelman's argument, that each nation exhibits a distinctive regulatory style, stemming from the political and social context in which public policies develop, can be found in the cross-national analysis of environmental policy making in the United Kingdom and the United States, as carried out by D. Vogel (1986). He argues that a nation's approach to industrial regulation does not take place in a vacuum, but needs to be understood within the specific socio-political and legal-institutional framework within which the interaction patterns among government, business, labour and the general public are structured, and in which environmental policies evolve. D. Vogel (1986) concludes that the United Kingdom and the United States have adopted divergent approaches to environmental regulation. The reason for these different environmental policies has to do with the fact that the two countries have different political-institutional systems for making and implementing environmental policies. In Britain the relationship between business and government

and their respective roles in the regulatory process can be described as an informal and relatively cooperative relationship between government officials and industrial managers. The British regulatory system has an built-in tendency towards consultation and compromise-seeking between government officials and representatives of industry, and industrial self-regulation fosters a voluntary and informal system of environmental controls within the industry. In contrast with the flexible and informal British style of environmental regulation, the regulatory style of the US can be characterised as being formal and rule-oriented, emphasising administrative discretion, legal enforcement and legislative supervision. The American regulatory system, being legalistic, stricter and more adversarial than other capitalist democracies, is, on the other hand, open in that it provides more opportunities for political participation and makes more information available to the general public. The making and implementation of environmental regulations in the US takes place in a publicly accessible system, providing interest groups with various platforms on which to further their interests: Congress, courts, the White House or the executive office of the president.

The primary focus of comparative public policy is on how states differ in the manner in which their policies are politically founded. This approach accepts the relevance of the distinctive cultural, ideological and structural context in which industrial policies are embedded and against which they are shaped. Dyson (1983: 42) has defined these national variations according to the tendency of states to intervene, through the concept of *industrial culture*. Countries develop their own distinctive industrial cultures, that reflects their tradition of public authority. Industrial cultures are expressed in attitudes and behaviour, but are also embodied in institutional settings, forming a mediating factor in the policy process. Concepts like national styles overaccentuate the differences between national systems and neglect to a large extent the similarities between various public policies. They provide a preliminary typology of policy styles, which is very helpful in descriptive studies, but which falls short in an analytical sense. Especially in a growing world economy and with European integration, domestic politics in Western Europe become more and more intertwined with international matters. Such a transnational development puts the current national styles under pressure and forces more convergence between national outlooks. In open and small economies there are a number of external influences that cannot be controlled; because of a higher economic dependency, the efficacy of national industrial policies is restricted. Several authors have drawn attention to the growing tension between increasing globalisation of business and decreasing national sovereignty (Ruigrok & Van Tulder 1995; Hirst & Thompson 1996). Structural developments like internationalisation of home-based industries, penetration of foreign investors, deregulation, and increasing R&D costs in high technologies fostering international cooperation (joint research, standards setting), favour an international or even a global business environment. These developments carry serious risks for the political autonomy of every country, but especially for small and open economies decision making freedom is seriously reduced.

Another shortcoming of the comparative public policy approach is the lack of differentiation between national public policies developed at the macro-level and

sectoral policies, developed at other levels. In the case of telecommunications, for example, policies are not only developed at the national macro-level, but they are also shaped, and formulated at other levels, such as the firm level, the meso-level (branch/trade associations), and the supra-national (EC) and global level (GATT, ITU). Originally, the concept of policy styles was used in a general sense to refer to national styles of public policy making; the level of analysis was the macro-level or state level of public policy making. The identification of national policy styles is difficult, however, because the macro-level is often (too) broad and as a consequence not distinctive enough to have its own character. The search for a predominant policy style has become more complicated by the disaggregation of the political system into semi-autonomous policy sectors. Jordan (1981,1990) has characterised the creation of various semi-independent policy communities within the political system as the 'sectorisation of public policy making'. Policy sectors are increasingly ruled by their own policy elite of major stakeholders and such a sectorisation of national policy making might imply a convergence of sectoral policy styles in Western Europe. Instead of one single policy making process there tend to be numerous relatively narrow and self-contained policy subsystems, by which actual policy shaping and decision making takes place. Within public policy making, we can see a certain disintegration of the political centre into specialised policy subsystems, centred around several policy networks with a high degree of group incorporation. The move towards greater segmentation in policy making is caused by factors such as an overloaded government, a lack of central coordination, and increased numbers of groups seeking access to the various policy arenas; this leads to increased difficulties in reaching agreed decisions in each policy sector. For example, education/science policies and industrial policies are increasingly made by sector-specific policy subsystems. The first arena is dominated by the 'professional' interests of the academic community (researchers, professors, universities and the like), supported in its aims by the responsible ministry of education & science. The policy arena of industrial policy is dominated by the 'producer's interests of the business community (big business, trade associations, trade unions and the like), supported in its aims by the ministry of trade and industry. This structural trend towards sectorisation restricts the national governments' room for manoeuvre and it can undermine the specific national policy style in favour of various 'sectoral policy styles', which show a certain convergence or similarity within certain policy areas tat go beyond national boundaries.

A third drawback in the comparative public policy approach, is that it underestimates the role of bargaining and strategic interaction between interdependent public and private actors and between national and international organisations. National policy styles are in effect, more or less stable, historically fixed standard operating procedures in the political-administrative sphere, based on institutional arrangements and traditions of political behaviour, which are typical for a specific nation-state. The approach of Richardson *et al.*(1982) acknowledges only two structural developments, namely overcrowded policy making and unconventional participation, as having profoundly changed policy making in the seventies and eighties. As Wagner & Wollmann (1986) have pointed out, just like

styles in architecture and painting change, so too policy styles (can) change. Policy styles are subject to minor and major changes in the political-administrative and economic systems of countries, like changes in cabinets and political party dominance, changes in the formation and recruitment of elites, the emergence of new dividing lines in society , changes in technologies and markets, or a shift in the normal policy making style as a response to critical events. National as well as sectoral policy styles can change over time. For instance, the coming into office of the Thatcher government with its privatisation programme produced a remarkable change in the British policy style, and regulatory reform in banking and the airline industries illustrates that certain aspects of a sectoral policy style can also change. So the agenda and the timing of the policy process is influenced by shifts in ideology and government, and in longer-term socio-economic developments, that might have a decisive influence on policy making over time. Today's policy process, for instance, is increasingly riddled by debates and negotiations in various semi-autonomous sectoral networks. This process of sectorisation puts new demands on the government to coordinate activities that cut across different sectors (e.g. tensions between industrial and competition policy, between media and telecommunications policy) and to identify and defend the public interest or vital national goals, going beyond the stakes of individual stakeholders and self-contained industries.

The existence of national styles for specific sectors, then is too much taken for granted; it is like a stereotype, that constantly needs to be (re)confirmed or falsified. The fact that national styles have the character of an intermediary rather than an independent variable is easily forgotten; for certain policy sectors, national styles do not exist, or do not vary that much or cannot be spelled out. This causes a process of selective perception, wherein the focus is on the hidden traits of national styles spelling out the differences between nations; convergent sectoral traits of an emerging regulatory style on the European or world level are overlooked. These national styles are not operationalised, however, but their existence is simply assumed. The relative importance of nation-specific *vis-à-vis* sector-specific factors in determining public policy for a specific sector is hardly ever spelled out (Freeman 1986). So it would appear that policy styles not only exist on a national level, but that there is such a thing as a sectoral policy style. In his cross-national study of nuclear policies, Rudig (1987) identified certain features of national policy styles, that only partially explained the differences between national policies. The overall hypothesis that the differences in nuclear development could be explained in terms of national policy styles, was not confirmed. The national approaches showed also remarkable similarities in the way the dependencies are structured between the involved parties in nuclear development. Nevertheless the persistence of national policy styles, the structure of the nuclear policy networks in the countries changed from a star-shaped network to a triangle-shaped network. Ruedig argued that a particular combination of technological requirements, the resources of different actors and their interrelationships and routines of decision making may explain international differences in (nuclear) technology policies.

2.3 *Comparative Political Economy: Techno-Globalism, Techno-Nationalism and Structural Adjustment*

Traditionally, governments have been involved in influencing the organisation and operation of domestic industries through the formation and implementation of industrial policy. Johnson (1984: 8) has defined industrial policy as *'the initiation and coordination of governmental activities to leverage upward the productivity and competitiveness of the whole economy and of particular industries in it. Above all, positive industrial policy means the infusion of goal-oriented, strategic thinking into public economic policy.'* Industrial policy aims at identifying new technological and economic opportunities, switching resources from slower growing *sunset* industries, like steel, coal and mining, to faster growing *sunrise* sectors like information technology and biotechnology. The comparative political economy approach studies the national economy and the development of domestic industrial policies as embedded in the broader context of international political and economic structures. Scholars working in this tradition have put emphasis on the international dimensions of the national economy by accentuating the relationships between domestic factors (role of the state, interest groups, institutions and economic ideology) and the international system (e.g. competitive advantage, technological performance, industrial policy, trade policy).

In his comparative research on technology policy, Ergas (1984,1986,1987) has posed intriguing questions, like *'why do some countries innovate more than others?* and *'do technology policies matter'*. In answering these questions, Ergas has made clear, that technology policies do matter in the sense that their effects depend on their institutional environment. The performance of national technological systems will vary according to the features of each country's socio-political and economic setting. Technology policy is part of a larger political and economic strategy aiming at international leadership, national security, general competition policies, or the provision of innovation-related goods like education, training, standardisation and cooperative R&D. Drawing upon the distinction between exit and voice-types of societal change, made by Hirschman (1970), Ergas argues that in the United States, Japan and Europe different mechanisms are used to bring about socio-economic change and innovation.

The US political economy represents the exit-based model, while Europe and Japan can be seen as representatives of the voice-based model for generating and structuring innovations. The US 'entry-and-exit' model refers to an open and competitive market, characterised by decentralised decision making, new entry, experimentation, and the eventual 'exit' of firms from the market. The resulting income shifts (i.e. future profits) will reward the growth of winners, and will squeeze losers out of the market. The strategy of deregulating the telecommunications and airlines industries in the early 1980s was aimed at establishing an environment in which rapid resource-(re)allocation could take place and thus create opportunities for businesses to enter or to leave these key industries (e.g. Derthick & Quirk 1985). Most of the Western European political economies (with the exception of Britain) and Japan are illustrations of the voice-based approach to structural change. Here, the

innovation and economic adjustment process is subjected to political negotiations between the various stakeholders and to a socially acceptable adaptation to the major changes in demand and technology. The ideal type of voice-based change accentuates that change is induced through consensus and through the conscious weighing of interests and options, buttressed by mechanisms for redistributing income between winners and losers. Compared with the exit-based approach the voice-based approach carries significantly lower social costs, but it has the big disadvantage that it risks sacrificing change to the defence of vested interests (Ergas 1984,1986,1987).

Ergas (1986,1987) has pointed out that governments have both political and socio-economic reasons for furthering innovation policies. The political rationale refers to the exertion of technological power for public or national security purposes. The government is involved in technology and industrial policy in its search for international strategic leadership and first mover advantages by protecting its domestic industry by way of large public procurement programmes. The fact that governments are leading edge customers of new products (especially in aerospace, micro-electronics and nuclear energy) and feel a need to compete with other nation states in global markets, is an important reason for strengthening national technological capabilities. This can be a primary motive for government action to shape its technology policies. The second reason has to do with the domestic industry's dependence on the provision of innovation-related 'public goods'. The development and diffusion of advanced technologies requires an adequate infrastructure, made up of an advanced education and training system that provides the necessary skills for innovation, a legal framework for defining and enforcing property rights and product standardisation, and interorganisational networks for cooperative research and technology transfer. The socio-economic rationale for industrial/technological policies concerns the manner in which these 'public' goods are provided and the roles government and industry play in this respect.

The socio-economic and institutional 'embeddedness' of innovation policy also differs from country to country. On the basis of the two rationales guiding technology policies, Ergas has made a distinction between *mission-oriented* and *diffusion-oriented* countries. In the first category priority is given to the policy objective of promoting and securing national key industries through ambitious research programmes of national strategic importance, in the second category the policy objective of diffusing technological capabilities to respond to new technologies throughout the industry structure by the stimulation of a favourable institutional framework is emphasised. Examples of mission-oriented countries are the United States, the United Kingdom and France, examples of diffusion-oriented countries are Germany, Sweden and Switzerland with Japan showing a combination of the two, deploying some selective ambitious programmes while at the same emphasising institutional capacities to diffuse innovation-related public goods.

Stevens (1990) has analysed two opposing trends in the high-tech industries, that seemingly pose a dilemma for both national governments and (multi)national corporations; the choice between *techno-globalism* and *techno-nationalism*. The development towards transnationalisation of industrial activities and the promotion of

free trade has been described by Stevens (1990) as techno-globalism. International technological cooperation may take several forms, varying from soft collaborative arrangements like international trade, foreign investment, international subcontracting and international licensing, to cross-border mergers and acquisitions, international joint ventures and R&D cooperation and global interfirm agreements with a more strategic character. The reasons for establishing techno-global arrangements can range from expanding markets, enlarging market access and increasing returns to R&D, localising production, allowing flexibility, obtaining technology synergies, R&D scale economies, sharing high R&D costs and spreading risks.

The economic process of techno-globalism has provoked a reaction of techno-nationalism in the political sphere. In the protectionist view, characterised by selective liberalisation and soft mercantilism, (key) technologies are a country's strategic assets to be developed and nurtured at home. Despite rhetorics about free trade and globalisation, industrial democracies subscribe only selectively to the principle of free trade: they pursue strategic trade policies for the home market where foreign markets are protected and domestic manufacturers are loosing international competitiveness (Milner & Yoffie 1989; Ruigrok & Van Tulder 1995). Like big transnational firms rivalling each other, governments also compete with each other in the global high technology race to promote the competitive position of their domestic industries on the world market (Van Tulder & Junne 1988; Roobeek 1990). In promoting large domestic firms in core technologies, European government have shifted from trade protection to measures aimed at stimulating domestic competitiveness, such as joint R&D projects, fiscal policy, public procurement programmes, and export subsidies. Of, course the main proponents of techno-nationalism and trade protectionism are governments, but they are often supported by national champions, relying to a large extent upon their home market. Multinational corporations like IBM, Philips and Siemens, however, operating on a world-wide scale, take advantage from both techno-globalism and techno-nationalism, following a twofold strategy and benefiting from both global operations and a protected home ground.

The convergence/national diversity debate will be the starting point of this cross-national research on European telecommunications policies. The two categories of variables will play a role at two different levels of analysis: the global level of increasing interdependence and the consequent emergence of comparable restructuring programmes in different countries, and the local level of national peculiarities and idiosyncratic policy responses. The first category consists of structural forces like the technological revolution, the globalisation and differentiation of communication markets, international deregulation and European integration, that erode the nationally-oriented and protected traditional regimes. The second category deals with variations in domestic economic structures and national institutional frameworks, that shape sectoral policies in a specific format, reflecting the nation's particular policy traditions and priorities. The answer to the question whether it is convergence or national diversity that matters most may be that they both play a significant role, but at different stages in the policy process. The convergence dictum is relevant because all countries are confronted with the impact of international restructuring in telecommunications: every nation state participating in the world economy, is confronted with the problem of how

to adjust its domestic industries, policies and institutional structures to drastic changes in technology, markets, competition and international deregulation. National diversity, however, could matter in the implementation stage, when national governments, firms, labour unions, and other actors actually decide upon the enforcement of adjustment programmes. So domestic decision making and policy making could be relevant because possible variations across nations might occur in the degree and the pace of responding and adjusting to international restructuring. In this research we will examine the differences and similarities in the ways three European industrial democracies, namely the United Kingdom, the Netherlands, and France, have coped with the structural forces of the international telecommunications industry and have formulated appropriate adjustment strategies.

The comparative political economy approach points out that the size of national economies, their place in the world market and foreign economic policies all have serious impact on their domestic economic and industrial policy. For example small open economies like the Netherlands and Belgium are highly dependent on the world economy; this means that there are a number of external influences that are beyond their control. World market dependency seriously reduces the efficacy of national economic policies. So the sheer size of the national economy and the dependence on the world market (the particular location of a country in the international division of labour) are perceived as important elements when comparing economic and industrial policies. The comparative political economy approach acknowledges that differences exist in the domestic structure of economies and their dependency on the world market (Katzenstein 1978, 1985). Domestic policies are made up by the dominant coalition between business and the state in the political-administrative and economic system and in key policy networks. The character of a country's ruling coalition conditions its objectives for foreign economic policy. Foreign economic policy is largely shaped by the ideological outlook and material interests of the ruling coalitions and the dominant policy networks. With the notion of ruling coalitions, Katzenstein has pointed out the importance of elite divisions and with the notion of policy networks he emphasises the importance of linkages between state agencies, intermediate associations and other societal actors.

An important element in comparative political economy is the role of the state in advanced industrial countries. The degree of state intervention in advanced capitalist societies and the role of interest groups in the policy process are decisive factors. Modern societies can be placed on a continuum between the two ideal types of economic organisation: on the one hand, an economic order, that emphasises the importance of decentralised market forces and exchange between the stakeholders in the economy (e.g. the United States to a large extent) and on the other, an economic order that embraces centralised economic planning by the state, as a legitimate power (e.g. the previous Soviet Union to a large extent)(Lindblom 1977). The mixed economies of Western Europe could be located somewhere at the middle of this in that they combine, to varying degrees, market capitalism with selective state intervention (Shonfield 1965).

Katzenstein (1978, 1985) has made a further distinction between three types of political-economic regimes within the group of capitalist societies:

i) *liberalism*, based on macro-economic policies and market solutions. Countries like the USA and the UK follow a liberal economic policy aimed at stimulating market forces and reducing the role of the government intervention wherever possible. Their economic policies are characterised by a strong export orientation, liberalisation of import (selective protection of import) and a welcoming of foreign investment;

ii) *statism,* aimed at pursuing a structural transformation of the economy by way of state intervention. Countries like Japan and France pursue a neo-mercantilist strategy favouring active intervention in the market. Policy makers of the state bureaucracy have a large number of instruments with which they can exert a direct influence on specific sectors and firms. Their economic policies aim at promoting exports to increase domestic competitiveness or to meet import needs, applying selective protection (a regulation of imports), and tolerating or even restricting foreign investment.

iii) and *(democratic) corporatism,* consisting of an ideology of social partnership at the national level, centralised policy making by way of a concentrated system of interest groups and voluntary coordination of conflicting objectives through continuous political bargaining between interest groups, state bureaucracies and political parties. The economic structure of countries like Sweden, Norway, Denmark, the Netherlands, Belgium, Switzerland and Austria is not very well suited to a political strategy based on liberal or statist premises: with their small and open economies, highly dependent on the world market, they follow a strategy aimed at flexible economic adjustment (export-led growth) and niche specialisation, backed by stable politics and domestic compensation at home (demand management). For these economies, economic flexibility and political stability are mutually contingent (Katzenstein 1985).

Another distinction between states can be made on the basis of the power a state has in relation to its own society. There are countries in which the government plays an active and legitimate role in the shaping of economic and industrial policies and there are others in which the relationship between business and government remains at arm's length or is even adversarial. Governments differ in the degree and ways they intervene in the national economy, varying between state-less societies and state-oriented societies or between strong and weak states (Shonfield 1965; Dyson 1980; Zysman 1983, 1994; Atkinson & Coleman 1989). The Anglo-Saxon societies are characterised by a liberal or *laissez-faire* tradition with business operating relatively independent from the state; in these countries, the government is unable to formulate policy goals to change the behaviour of specific groups or the structures in society autonomous of particular groups. The German, Swedish and Dutch states are examples of so-called neo-corporatist systems with moderate state intervention, where the state works together with its social partners (organised business and labour), and sometimes with the banking community to reach cooperative agreements which benefit the individual parties involved as well as the economy as a whole. In

France, Japan and to a certain extent Italy, industrial development is government led; these countries are characterised by a strong and close relationship between government and industry, making it extremely difficult to determine where government ends and industry begins. The governments in these countries are able to formulate policy goals and change the structures in society in collaboration with business or, when necessary, independently from particular groups in society.

2.4 *Gourevitch' Integrative Approach: Five National Variables*

The comparative political economy approach, as discussed above, focuses on the international context within which national industrial and economic policies are conducted; this implies that policy choices and politics of accommodation at the national level are constrained by specific domestic conditions and international economic and political interdependencies. Others have referred to the historical timing of a country's industrialisation, causing variations in the process of economic development among countries, the task a particular society must accomplish, and the economic position it will occupy in the international division of labour (Gerschenkron 1962; Shonfield 1965; Gourevitch 1986). The timing of a country's industrialisation will determine which industries must serve as a growth engine, and how the social, technical and financial resources have to be mobilised and organised, for a society to be successful. Early industrialisers and market leaders are more oriented towards free trade, because they have a competitive advantage in trade over those who come later. First movers, benefiting from superior technological, economic, and/or political conditions, tend to favour and introduce trade liberalisation unilaterally; in the words of Ruigrok & Van Tulder (1995: 209): *'free trade is the protectionism of the strong.'* Compared to the early industrialisers with their entrepreneurial spirits and well-developed capital markets, disciplined labour forces and relatively autonomous firms, late industrialisers, in terms of their institutional infrastructure, are poorly equipped. In the words of Gerschenkron (1962) these societies are *'economically backward'* with private firms, the economic system and the institutional framework inadequately equipped to accomplish economic modernisation (e.g. predominant pre-capitalist feudal forms). Gerschenkron has argued that the later a nation industrialises, the more organised it must be (in terms of the concentration and centralisation of capital and the mobilisation of resources, in order to compete effectively with early industrialisers. Industrial followers, overshadowed by stronger competitors, have to pursue a shelter strategy and protect their weak key industries (the 'infant industry' argument) and build up competitive capabilities through state guidance and appropriate investment banks (or credit-based institutions) to generate funds and make longer-term loans to industry.

Gourevitch (1986) is looking at *'the politics of support for different economic policies in response to large changes in the international economy.'* His reasoning is that in cases of emergent economic crises, the dominant coalitions, that have guided domestic politics in the pre-crisis years, are challenged. Established interests and policies are put under review and political controversies about the best way to cope with the external changes are the result. The next stage in the policy debate is the

process of support mobilisation and alliance formation where adequate policies and supportive politics become linked and coalesce in the development of a common resolution, and a balance in the system emerges that is maintained until the next crisis. So the policy process shows the formation of alliances in conjunction with the generation of policy alternatives; these coalitions not only contribute to the development of eventual policy packages but they also provide the political support needed to get polices adopted and implemented. Gourevitch (1986) has illustrated that the policy packages and supportive coalitions that emerge in the political process of preparing an appropriate adjustment strategy, vary from country to country according to five variables. In explaining industrial adjustment policies to international economic restructuring, Gourevitch has distinguished the following national contingencies:

- *production profile*: the policy preferences of societal actors as shaped by the different resource conditions, the size and the open-closed character of their domestic economy (see section 2.4.1.);
- *organisation of interest intermediation*: the distribution of power among social groups (dominant coalitions) and the framework of interest representation through which intermediate associations have established particular linkages between societal actors and the state (section 2..4.2);
- *structure of the state*: the organisation of the political and legal-administrative system, the balance of power between the executive, legislative and judiciary and the relationships among departments within the public administration (section 2.4.3);
- *economic ideology and culture:* values, norms and blueprints for the socio-economic ordering of society, providing economic motives and social beliefs for societal actors (section 2.4.4);
- *the positioning in the international political-economic system*: the place of a particular country in the global economy and its international political, economic and military affiliations (section 2.4.5).

2.4.1 Production Profile

The first factor shaping the domestic response to international and techno-economic restructuring, is the production profile of a country. Broadly interpreted, this includes all the tangible and intangible resources, capabilities and endowments of one economy compared to other economies and the way these domestic assets contribute to economic performance and give the economy a competitive edge. The relationship between the attributes of countries and their international competitiveness has been investigated in economics, but rather one-sidedly and selectively. Earlier research has primarily focused on particular macro-economic conditions, and the natural and basic factor (dis)advantages of countries, overlooking the strategic role of firms, the way they are embedded in larger industrial clusters and the national institutional environment facilitating both competition and collaboration in domestic industries. Traditionally, national competitiveness was mainly defined through macro-economic variables, such as factor prices, aggregate demand, levels of savings and investment,

exchange rates and trade performance, employment and wage levels, interest rates, profitability and government deficits (cf. Shonfield 1965). The causal link between national production factors, aggregate economic conditions, and a government's policies to stimulate the macro-environment and policy outcomes referring to a country's performance vis-à-vis other economies is, however, rather weak and not necessarily straightforward, if one excludes intermediary variables located at the industry and the institutional levels. Industrial economists and economic historians, such as Porter (1990), Best (1990), Chandler (1990) and Nelson (1993),, have suggested that the dynamic forces of entrepreneurship, innovation, corporate strategy, domestic rivalry and geographical concentration in the home market, also contribute to a country's success or failure.

Porter (1990) claims that, paradoxically the increasing internationalisation of business activities and the intensification of world-wide competition, makes nations more, not necessarily less, important. In other words, he argues that national prosperity is created, not inherited. Although a country's natural endowments and macro-economic conditions might be beneficial, national competitiveness ultimately depends on the capacity to innovate and upgrade. Differences in culture, economic structures, institutions and history, all influence the feasible options of countries on their path to competitive success, but ultimately competitive advantage is created by a country's leading companies and sectors. National characteristics and attributes apply to many if not all industries, but do insufficiently recognise the actual economic organisation of an industry and sector-specific circumstances, that constrain the choices of firms and the policy outcomes; in the words of Porter (1990: 619): *'firms compete in industries, not in nations'*. Given the fact that firms operate in industries with different levels of competition and that these rivalling firms are also embedded in a domestic institutional environment that might facilitate (or inhibit) innovation and advancement, one should examine the way a nation shapes the ability of firms to succeed (or fail) in particular industries. In industries where internationally successful firms are frequently concentrated in particular cities or regions within countries (e.g. Benetton and its rival Stefanel in a small town in the North of Italy), one could even question whether the national and industry levels are the appropriate levels to analyse competitiveness.

The competitive strategy of firms (e.g. efficiency-driven, differentiation, diversification), their particular capabilities and skills (e.g. proprietary technologies, expertise, distribution channels etc.), the nature of competition in industries (e.g. single product, multi-product) and the linkages with related and supporting industries (e.g. upstream and downstream in the value chain, foreign partners), are crucial in explaining a country's competitiveness (Porter 1990; Chandler 1990; Best 1990). In the knowledge-intensive industries, the influence of the national institutional environment has become vital. National governments, but also local/regional authorities, have certain instruments at their disposal to enhance advanced factor conditions (e.g. education & training policies), provide collective goods (technology transfer mechanisms), and establish supportive institutions (e.g. science parks, artisan as separate legal category), and thus promote national (or regional) competitiveness. In addition to this, national governments can increase domestic rivalry (i.e. strong

competition policy), improve the quality of the factors of production (e.g. training and education), upgrade demand, stimulate intra- and intersectoral linkages (e.g. joint R&D projects), and enforce tight product, safety and environmental standards. Whether the national government should take an active role in trade promotion, for instance through the pursuit of a managed trade policy, is a point for discussion among industrial and political economists. While Porter (1990) favours the promotion of domestic rivalry and a minimalist role for the state, Ruigrok and Van Tulder (1995) argue that strategic trade policy, aimed at strengthening the techno-industrial base and international competitiveness of a country, are still dominant. Especially in the key industries, leading domestic firms and national governments often act in conjunction to further shared trade preferences, largely shaped by the strengths and weaknesses of the national economy (e.g. trade liberalisation and infant industry protection).

Further evidence that national capabilities still matters in an internationalising world economy can be found in Nelson (1984, 1993) and Ruigrok & Van Tulder (1995), who focus on the contribution of national systems of innovation and industrial complexes, centred around a core firm in its home base, to the performance and competitiveness of countries. Nelson (1984, 1993) has compared high technology industries across countries (e.g. electronics, aerospace, aviation, nuclear power) and related national systems of innovation of economies, varying in size and affluence. He has focused on the way public and private funding of R&D, large military (and public procurement) programmes and commercial spillovers in innovative and strategic sectors contribute to the larger objectives of national security, technological leadership and international economic expansion. Nelson has sought to link the domestic institutional arrangements, that govern the activities of large firms, industrial R&D laboratories, user-supplier linkages, education/training institutions, government agencies, and leading edge customers, with the technological and economic performance of economies. Ruigrok and Van Tulder (1995) use the term 'industrial complex' to describe the close relationships between a core company (i.e. the spider in a sectoral or technological web), and its stakeholders: suppliers, trade unions, distributors and governments. These industrial complexes are highly internationalised in terms of the transfer of goods, services, money flows and investments, but at the same these corporate-industrial networks are solidly embedded in the home base of the core firm. Large core firms appear to be relatively successful in controlling their domestic stakeholders, including their home government (e.g. benefiting from favourable trade barriers and trade policies). At the same time, they are able to play one state against another and thus bargain for favourable conditions (subsidies, fiscal rebates, infrastructure provision, etc.), that will facilitate their international expansion.

Porter (1990: 1) starts his massive study on the competitive advantage of ten nations in a large set of industries with the intriguing question: '*why do some nations succeed and others fail in international competition?*'[1] The level of analysis chosen in

1 His sample of countries included the following countries: Denmark, Federal Republic of Germany, Italy, Japan, Korea, Singapore, Sweden, Switzerland, United Kingdom, and the USA. The industries selected for the study were ones in which the ten countries had a significant international market position in 1985. An overview of the industries that were examined can be found in Porter (1990: 26/27).

his cross-national study on the international success (and failure) in particular industries is the home base where the competitive strategies of the leading firms develop, processes of rivalry and geographical concentration evolve, and where advantages in technology, factor quality and corporate capabilities are created. Porter (1990) introduces four determinants that contribute to a nation's competitive advantage:

1. *factor conditions*: each economy has certain endowments or factors of production that function as inputs to any industry. A distinction can be made between basic factors, such as land, natural resources and labour, and advanced conditions, such as transport and communications infrastructure, knowledge resources, educated labour, and capital;
2. *demand conditions*: the nature of home-market demand for the industry's product or service is a second determinant of national competitiveness. It includes the composition and character of the home market and the quality and quantity of domestic demand;
3. *related and supporting industries:* the third determinant of national competitiveness is the availability of networks of suppliers, distributors, or otherwise related industries (e.g. specialised banks or service firms), and the way they are linked with the leading domestic companies (e.g. loosely or tightly coupled);
4. *firm strategy, structure, and domestic rivalry*: the final determinant of competitiveness refers to the goals, commitments, and skills of the leading companies, the products or services they provide, and the degree and nature of domestic competition. Domestic rivalry will push local competitors to increase efficiency, improve quality and service, and create new products and processes.

Together, the four determinants of national competitive advantage make up a 'diamond', defined by Porter 1990: 72) as a mutually enforcing system, in which the effect of one determinant is contingent on the state of the others. A mix between domestic rivalry and geographic concentration will upgrade the entire diamond and intensify the interaction between its four elements, that contribute to the competitive advantage of nations. The four determinants are complemented in Porter's model by two influencing factors, namely chance and government (see figure 2.2). 'Chance' includes unexpected developments, such as scientific breakthroughs and inventions, wars, external political developments, and other shifts in the world economy (e.g. oil shock). 'Government' normally influences the four determinants as catalyst, pusher and challenger without taking full responsibility; in the words of Porter (1990: 128):'*government, it seems, can hasten or raise the odds of gaining competitive advantage (and vice versa) but lacks the power to create advantage itself.*' Van Den Bosch & De Man (1994) have criticised Porter for underestimating the direct impact of government on the business environment by referring to two specific roles governments may play to enhance a country's competitiveness. First, the role local and regional governments play in business development, innovation and industrial restructuring is not fully acknowledged in Porter's framework. Secondly, the role

governments play over time in shaping firms and industries needs to be differentiated according to the phase of the life cycle an industry is in. The authors, therefore, suggest that government be included as a fifth determinant of a nation's competitive advantage (cf. Best 1990).

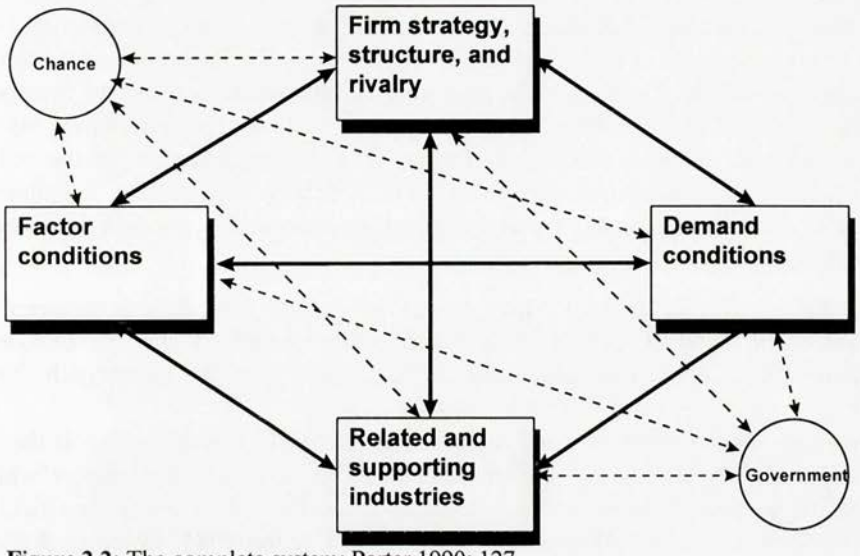

Figure 2.2: The complete system: Porter 1990: 127

In the process of national competitive development, Porter (1990) distinguishes between factor-driven, investment-driven, innovation-driven and wealth-driven nations. Factor-driven countries emphasise the exploitation of the basic factors of production (e.g. natural resources, and cheap labour), price competition, and the use of simple product and process technologies (often acquired from abroad) (e.g. Singapore). Investment-driven nations appropriate new technologies and methods from abroad and improve them gradually (e.g. Korea). Given the large-scale of investments needed and underdeveloped condition of the related and supporting industries, the strategy to catch up with the leading nations, is only viable in some 'targeted' industries. Innovation-driven nations show an ideal mix between the four determinants with healthy competition, sophisticated and differentiated demand, a wide technological-industrial base, and an overall favourable factor conditions (Japan, USA). Such a business climate fosters innovation and encourages the formation of new businesses and newly emerging industries. Wealth-driven nations, finally, are in relative decline: domestic firms loose their international competitiveness and the whole range of industries is gradually eroding (e.g. the UK). With social programmes already putting a heavy burden on national competitiveness, the country's diamond is loosing coherence with domestic rivalry, investment and innovation jettisoned and leading firms following risk-avoiding strategies, seeking government support and reducing competition by widespread consolidation.

2.4.2 *The System of Interest Intermediation*

Another factor influencing the formation and implementation of particular economic policies, accommodating domestic conflicts and coping with international and techno-economic pressures, is the system of interest intermediation. Private interests in society are articulated and transmitted to political decision making bodies through collective associations. Corporate actors, labour unions, banks, consumers and farmers, all participate in policy making through their umbrella organisations acting at industry and state levels. Besides providing certain social services to members, interest associations contribute to public policy making by functioning as an information and lobbying channel to further their private interests in the policy process, and carry out (some) administrative tasks (e.g. setting codes of conduct in sectors or functional areas). Three levels of interest intermediation have been distinguished:

- the macro-level of national policy formation: the accommodations between the government (cabinet, parliament and public administration) and the peak-level organisations of labour and business (e.g. Schmitter & Lehmbruch 1979; Lehmbruch & Schmitter 1982; Olson 1982);
- the meso-level of industries and regions: this intermediate level serves as the site for productive bargaining between state agencies and collective actors with a specific sectoral concern, and where interests are limited to one policy field or geographical area (e.g. Wassenberg 1982, 1990; Cawson 1985; Coleman & Jacek 1989);
- the micro-level of individual corporate entities: the direct interaction between state agencies and the representatives of an individual firm (e.g. Cawson *et al.* 1990; Grant *et al.* 1988).

Political scientists and (political) sociologists have promoted the comparative analysis of public policy by looking at the varying patterns of the exchange relationships between state agencies and the organised interests of business and labour as key variables in explaining cross-national variations of political and economic (in)stability, and economic and industrial performance.[2] Two distinctive systems of policy advocacy and interest intermediation can be distinguished: corporatist and pluralist frameworks of organised interests. The distinction between these two ideal types relies upon the extent to which the activities of pressure groups are structured and officially recognised by the state.

The (neo-)corporatist system is a relatively closed, stable and integrated framework of institutionalised macro-economic bargaining (e.g. industrial relations and employment policies, macro-economic management) between representatives of government, labour and management. Corporatism is characterised by representational monopolies of interest organisations, strong organisational control on the basis of compulsory membership, clearly defined jurisdictions and the

2 See e.g.: Schmitter & Lehmbruch 1979; Lehmbruch & Schmitter 1982; Streeck & Schmitter 1985; Cawson 1985; Hollingsworth *et al.* 1994; Van Schendelen & Jackson 1987b; Van Schendelen 1993b.

exercising of public authority by private groups (Schmitter 1979). In such a system the functional categories of labour and business have organised their interests through a representational monopoly within their own ranks at the macro level of the state through peak organisations representing employers and workers or at the industry or meso level through branch or trade associations and sectoral trade unions. On the basis of their representational monopoly, these institutionalised interest associations are involved in political and economic exchanges with the state in the formation and implementation of public policies (a kind of social pact). Neo-corporatism can been interpreted as a distinctive framework of interest intermediation (i.e. *the ways in which interests are organised),* or it can be seen as a specific form of so-called concerted public policy-making in which the state, in conjunction with organised labour and capital, shapes socio-economic policies (i.e. *the ways in which decisions are made and implemented* (Schmitter & Lehmbruch 1979; Lehmbruch & Schmitter 1982).

Corporatism can be seen as a comprehensive system of interest intermediation that helps to create socio-political stability and economic growth through class collaboration and cooperative economic crisis management (Schmitter 1979). The peak-level associations of labour and business contribute to the functioning of the state apparatus through their involvement in the legislative process and in the implementation of specific government programmes; the role of the state in such a corporatist system is restricted to mediating and regulating the conflicts between organised labour and business. Public authority in policy formation and implementation, previously the exclusive responsibility of the government, has been transferred to 'privileged' private interest groups, that now fulfil legitimate functions in the policy process: (Offe 1981). The neo-corporatist system has triggered a self-reinforcing development in socio-economic policy making, beneficial to the modern state, that received expertise and commitments from its major private stakeholders in the policy process. Integrated interest associations, recognised by the government as its exclusive social trading partners, have led to a mixed governance mode of *private interest governments, beyond market and state'* (Streeck & Schmitter 1985).

Challenged by the recession in the late 1970s and early 1980s, the neo-corporatist regimes proved conservative and unable to adjust smoothly to the new international and economic conditions. Olson (1982) has argued that distributional coalitions reduce a country's capacity to adopt new technologies, slow down the reallocation of resources and hamper the adaptation of the institutional structures to the changing international and techno-economic conditions. According to Olson, the longer a society enjoys political and economic stability, the more likely it is to develop powerful special-interest lobbies with a strong desire to preserve their established economic privileges. The special-interest organisations develop over time into a powerful network of *distributional coalitions*, which dominate markets throughout the economy on the basis of their representational monopoly and political power. After some time these accumulating networks of special interest organisations slow down collective decision-making, reduce the mobility of resources, build up entry barriers and discourage institutional change just to protect their vested interest. The

overall effect of these distributional coalitions is a decline in economic efficiency, slowing down economic growth and finally resulting in stagflation.

The pluralist organisation of interest intermediation is characterised by a political order in which multiple and overlapping interest associations, representing individual preferences, compete for access to the political process (Schmitter 1979; Richardson & Jordan 1979; Van Schendelen 1987b, 1993b). Such a relatively open and dynamic system responds selectively to the demands of contending private interest groups in the political market place. Recently, researchers have begun to study European decision making and the integration of interest intermediation at the EC-level as a fourth aggregation layer. Surprisingly enough, in view of the corporatist patterns found in many of its member states (the Benelux, the Scandinavian countries, Germany, and, to a lesser degree, France and Italy, there does not appear to be such a thing as a corporatist European Community (Sargent 1985; Streeck 1993; Streeck & Schmitter 1991; Greenwood *et al.* 1992). Although there were some initial steps towards Euro-corporatism with some tri-partite structures in the sixties and the early seventies, the current institutional system of the European Community, is qualified by Streeck and Schmitter (1991: 159) as an '*American-style pattern of disjointed pluralism*' or '*competitive federalism, organised over no less than three levels - regions, nation-states, and Brussels.*' Like the United States of America, the European Union exhibits a dispersed decision making structure, made up out of supra-European, intergovernmental, national and even regional layers, and allowing for multiple channels of influence and persuasion (Council of Ministers, Parliament, Commission, Court of Justice, Committee of the Regions).

The dispersion in policy and decision making is mirrored by the fragmented structure of organised interests, allowing various stakeholders to compete with each other in their attempts to influence European decision making. Furthermore, the European-level interest organisations, hampered by overlapping jurisdictions and thus without a representational monopoly, are not (yet) integrated hierarchically in policy formation and implementation. The institutional framework is characterised by a limited discretion on the part of the Commission in industrial/economic policies, relatively weak corporatist structures and functions at EC-level and with only weak parliamentary arrangements. In its consultations, the European Union seems to favour the representatives of national governments, organised business and individual large firms. Next to the relatively weak peak associations of organised European business and labour (UNICE and ETUC), we find a host of other collective actors like the European Round Table of large industrialists (the transsectoral ERT), joint R&D networks, various national and European branch associations, national champions, large American and Japanese firms, and dispersed national (sectoral) unions (Greenwood *et al.* 1992; Wassenberg 1990; Van Schendelen 1993b).

Lehmbruch (1982,1984) has put the various systems of interest mediation on a scale from pluralism (or 'no corporatism') to strong corporatism:

- *pluralism*: characterised by the predominance of pressure group politics and the lobbying of government agencies and parliament by fragmented and competing interest groups and a low degree of effective participation in policy making (US, Canada, Australia);
- *weak corporatism*: distinguished by the institutionalised participation of organised labour in the formation and implementation of policies only within certain limited sectors of policy or by its participation only in specific stages of the policy process, with limited scope for collective bargaining (United Kingdom, Italy);
- *medium corporatism*: sectoral union and business participation with a wider scope for collective bargaining and some successful attempts at concerted income policies (Ireland, Belgium, West Germany, Denmark, Finland, Switzerland);
- *strong corporatism*: effective participation of labour unions and organised business in policy formation and implementation across those interdependent policy areas that are of central importance for the management of the economy (Austria, Sweden, Norway, the Netherlands).
- *concertation without labour*: unbalanced corporatist system, biased towards the integrated participation of business in policy making, at the expense of labour (Japan and France).

In the corporatist/pluralist tradition there has always been a strong emphasis on macro-economic policy making, with the focus on issues such as inflation, employment, growth, and tri-partite bargaining between government and the peak associations of labour and business on formulating an appropriate industrial adjustment strategy. Other mechanisms of interest intermediation, such as financial institutions governing money flows between business and between the state and industry, have been overlooked and underestimated (Zysman (1983). Stock markets, state-controlled credit institutions and large universal banks can also affect the corporate strategies of firms and the macro-economic and industrial choices of governments. Zysman (1983, 1994) has identified three different national financial systems and associated adjustment strategies: a capital market-based system with a company-led adjustment strategy, a state-guided credit system with an administered adjustment strategy, and a private credit-based system with an adjustment strategy based on negotiations. (cf. De Jong (1995).

The first institutional arrangement relies upon a dominant Stock Exchange, in which financial resources are allocated through competitively established prices and market forces (e.g. the market for corporate control). The adjustment strategy in those societies is company- or market-led, with the leading corporations in a country, their shareholders and other (potential) capital suppliers, taking the key decisions over industrial investment and production; discretionary control of labour and government is limited. The long run development of the national economy is largely in the hands of corporate management (supposed to serve the owners' interest), who

negotiate loans and seek to acquire funds from capital suppliers. The USA and the UK are examples of a market-based financial system.

The second arrangement is a state-controlled credit-based financial system, in which discretionary control over the money flows and industrial credit allows the government to instigate business alliances and restructure industries. The process of industrial change relies upon strong ties between financial institutions and industry (e.g. financial-industrial holdings), and overall state guidance of economic development. The adjustment strategy is state-led: through administered prices and creative credit manipulation (together with state ownership of key firms), the central government actively intervenes in industrial affairs and thus shaping particular sectors. France is an example of a state-controlled credit-based system.

The third arrangement is a credit-based financial system, dominated by large industrial banks that often have a minority stake in the control of the nation's key corporations. The system is institutionalised in a social partnership economy, that gives more or less equal political weight to the interests of corporate management, shareholders/investors, labour and government. In Germany, for instance, large universal banks, together with industry and the federal and state governments, are the pre-eminent actors in the transformation and allocation of financial resources. Banks have close links with industry: they hold substantial parts of the shares of leading companies and are represented on the boards of companies. The adjustment strategy in such a setting is negotiated-led (or corporatist led): all the various social and economic constituencies are bargaining continuously over the terms of industrial change (e.g. wages, employment conditions, innovation, future planning etc.).

Wilks and Wright have suggested keeping generalisations about the state and business or the role of the state *vis-à-vis* industry to a minimum. As the interaction patterns between government and industry within concrete policy networks often show in practice, differences between public and private interests are often obscure, and there are remarkable contradictions between what government and industry were expected to do and what actually happened in practice (Wilks & Wright 1987a). In practice, both government and industry often show a lack of internal coordination, which seriously questions the integrated character of government and business; as Wright (1988) states, government is *'fragmented, differentiated and fissiparous (597)'* and industry *is 'neither monolithic nor homogeneous (599)'*. Both market and state are composed of a plurality of collaborating and at simultaneously competing institutions. Markets differ in scale, degree of internationalisation, collective dynamics and institutional characteristics. National governments are fragmented into semi-independent institutions, serving not only the public interest but their own institutional self-interest as well. Firms and states are essentially political *and* economic actors: firms exercise their market power and use their resources in their dealings with other firms and in their interactions and accommodations with government, and government agencies are of course officially involved in public policy development, but in some respects they act as economic actors by promoting the interests of domestic industries internationally.

Wilks and Wright have put forward that the strategic interactions between government and industry should be disaggregated into sectoral policy networks. Economic sectors are made up of a configuration of dependent actors, like government agencies, firms, business associations and labour unions, that have certain common points of reference (shared perceptions, values, norms) and act within a common institutional framework, structuring their resource dependencies and interactions (Wilks 1986; Wilks & Wright 1987b). The analysis of government-industry relations within their *policy network perspective* focuses on identifying and analysing the relationships and exchange patterns in economic sectors, and the distribution and use of power within industries and between representatives of industries and government. Their level of analysis is therefore the sectoral or meso-level, that lies between the micro-level of individual organisations and the macro-level of the state. At the meso-level, where public agencies, business associations, employer associations, trade unions and individual firms meet, attention can be given to the discretion of individual companies, and organised interests as well as state agencies and their strategic interaction in industrial policy making (cf. Wassenberg 1982; Cawson 1985).

In their comparative study on government-industry relationships in the British and German chemical industry, Grant *et al.*(1989) have found that this sector was highly concentrated in both countries. For a long time this sector has been dominated by only a handful of large transnational firms: ICI in Britain and Hoechst, BASF and Bayer in Germany (the three IG Farben successors). These firms are highly internationalised in terms of their corporate structure as well as in the spread of their markets. Grant *et alia* pointed out that this domination by a small group of transnational firms, who think in terms of global rather than national or domestic markets, is an important trait of the chemical industry. The same kind of hegemony is found in other countries as well (e.g. Dow Chemical and Du Pont (USA), Hoffmann-LaRoche (Switzerland), Rhone-Poulenc (France). The fact that the chemical industry is very capital and research intensive has made the industry one of the most concentrated and internationalised. Besides being stable, highly concentrated and transnational in character, the chemical industry is characterised by a tendency to resort to cartelisation (governing output, prices and markets), largely insulated from state intervention. The small number of key decision makers from all over the world meet regularly, giving the impression of a 'club-like' industry able to sort out its own affairs, keeping government involvement to a minimum. Problems of industrial adjustment are solved by the industry itself, largely without state intervention; the overcapacity problem of petrochemicals in the seventies, for example, was solved through bilateral and unilateral arrangements, reducing capacity by the chemical industry and its constituents (firms and industry associations). The international and club-like traits of the industry have put increasing pressure on extra-national forums, like the EC, OECD, and EU-level industry associations, to become increasingly involved in industrial restructuring.

In terms of meeting the demands of internationalisation management, the internationally operating companies and industry associations are far ahead of the trade unions, political parties and domestic governments, who basically still operate

at national level. As Grant *et al.* (1988: 10) make clear: *'in an internationalised industry, such as chemicals, the scope for national action to overcome weaknesses in a domestic chemical industry is limited'*. Trade unions still represent domestic interests and conduct their bargaining with transnational firms on a national basis. They lack the international orientation to develop an effective counterforce at higher bargaining levels. The insulation of the chemical industry from government and union involvement was seriously challenged with the entrance of various environmentalist pressure groups into the political arena. 'Green politics' became one of the main political confrontations for the chemical industry in the eighties (Grant *et al.* 1989). In the highly international chemical industry differences between national patterns of government-industry relations tend to be rather small; global market forces and the increasing influence of international forums, like the OECD and the EC, have increased the need to harmonise European, American and Japanese regulations. And although the state is in a comparatively weak position *vis-à-vis* the chemical industry, the implementation of corporate policies remains a matter for national governments: they still play a role in implementing measures, dealing with environmental regulation, supporting R&D and so forth.

The policy networks of the British and the German chemical industry were made up of the same actors: senior managers of leading firms, the main industry associations, the section of the national or European government administration, responsible for the chemical industry, and a minor role for organised labour. Nevertheless these striking similarities, Grant *et al.*(1989) saw some national variations between the structure of the policy communities: the network was more integrated in Germany with tighter links between its parts than in Britain. The German policy style was formal and codified, and the British style as informal and pragmatic. As a consequence, Germany was more able than Britain to manage industrial adjustment in the chemical sector, through an interorganisational concertation between the three giants (BASF, Hoechst and Bayer), their industry association VCI, the federal state, the regional governments (*'Länder'*), the financial sector and the labour unions. The British policy community lacked the German tradition of coordination through collaborative action and illustrated a tendency for autonomous action on the part of individual firms, unions, banks and government departments. As opposed to the German characteristics of partnership and coordination, the British system could be characterised by government factions establishing direct relations with the main companies, and keeping industry associations, banks and unions at arms' length. Grant *et alia* found that the three German firms relied on their industry association VCI in dealing with the (federal) government, whereas in Britain the public affairs departments of the large chemical firms engaged in extensive lobbying. Furthermore, the researchers found that the German banks have played a more active role than the British in the selection of high ranking personnel and expertise in internal and external restructuring; the British chemical companies have a more distant and autonomous relationship with the financial sector. Another difference between the two countries has to do in the distinctive feature of the German federal system, i.e. the influential role of the

Länder. At this level a German equivalent can be found of the British traits of direct and intensive relationships between individual firms and the regional authorities.

2.4.3 The Role of the State

The role of the state in the national economy is another factor influencing a nation's particular response to industrial development and to changes in the world economy. A government may be involved in the economic process as a large producer of goods and services in a competitive market place, as an owner of enterprises in the key industries (railways, telecommunications, utilities etc.) or as an important customer, buying expensive equipment for its defence, communications and utility systems. Furthermore, governments are actively involved in the management of the economy as negotiators and facilitators, i.e. bargaining with the major stakeholders in socio-economic policy formation and implementation, and stimulating industrial development and the performance of leading firms via indirect means (e.g. subsidies, fiscal incentives, regulation). It is not necessary the case, that the state governs the national economy or stipulates the conditions for the functioning of the economy. The state might also be captured by powerful private interests and act as a vehicle or an agent of its domestic industries to attract (or prevent) foreign investment.

In explaining the character of government-industry relations, Dyson (1983; 1980) has referred to the differences in legal-political tradition by distinguishing between state-oriented societies and state-less societies. The latter category is represented in the Anglo-American liberal tradition, giving an emphasis to values such as representation, voluntarism, self-regulation and scepticism about government competence; within this tradition there has been a preference for government at 'arm's length'. The former category is represented in the European continental tradition, emphasising values such as unity/integration, precedence of public over private interests, solidarity and objectivity. This state-oriented tradition has favoured the emergence of formalised institutional structures, where the states intervenes directly in the economy for strategic reasons, or where the state merely cooperates with the social partners in order to increase the welfare of its citizens.

In his comparative study on state structures and state-society relations and their particular contribution to industrial transformation and economic performance in six developing countries, Evans (1995) has distinguished between two ideal types: the predatory state and the developmental state.[3] The first category of predatory states refers to a setting with a weak and incoherent bureaucracy and authoritarian private elites, and 'individualised' ties between the state and society, whereby national policies reflect the vested interests of the ruling cliques in society (e.g. corruption and clientelism). In other words, the pre-bureaucratic government and large parts of society are dominated and exploited by a small group of powerful constituents and, as a consequence, the state apparatus lacks autonomy from society and is incapable of formulating or implementing goals for industrial transformation. To Evans (1995: 45), Zaire under the Mobutu regime is the 'archetype of the predatory state'. The

3 The term 'developmental state' has been borrowed from Johnson (1982), who used it as the appropriate term for the role of the Japanese government in economic development (see below).

second category of the developmental state refers to a setting with an autonomous and competent state bureaucracy, and an organised network of private actors, who provide useful intelligence and channels for decentralised implementation in society. The bureaucracy shows a strong corporate coherence and a merit-based status system, insulated from clientelistic pressures or traditional loyalties. The institutionalised linkage of state agencies with private elites with a clear interest in economic and political modernisation, fosters a long term perspective on industrial development and a joint commitment to engage in large-scale and risky transformative investments. Japan and Korea can be seen as pure examples of developmental states. Evans (1995) introduces the term 'embedded autonomy' to refer to the mutually reinforcing relationship between bureaucratic capacity ('corporate coherence') and social connectedness ('dense state-society relations') as the precondition for rapid industrial progress.

Developmental states can be divided further into four subcategories (Evans 1995). The first two, 'custodian' and 'demiurge' focus on different combinations between the conventional roles of regulator and producer, and the last two, 'midwifery' and 'husbandry' represent variations in interaction patterns between public agencies and private entrepreneurial groups. The first subcategory *custodian* assumes a regulatory role for the state in the national economy and in industrial transformation. Besides playing the role of a more generic producer of infrastructural goods and complementing private investments, the central governments seeks to combine the functions of protection, regulation and promotion to advance industries and technologies. By preventing private capital from investing in undesirable or inappropriate activities (restricting foreign entry and imports) on the basis of the infant industry argument, the government stimulates the emergence and expansion of sectorally specific administrative agencies. The protective development of the IT industry in Brazil and India are examples of a custodian role of the state. In the second subcategory *demiurge* the state plays a creative and managerial role in sectoral transformation through the establishment of state-owned enterprises that compete in markets for private goods. The government takes on productive activities itself rather than leaving them to private firms because of a lack of private capital (local capital incapable and transnational capital unwilling) to develop a new sector, but also to replace or compete with private firms. The promotion of steel production in Brazil and Korea are examples where the state played the role of demiurge.

In the third subcategory *midwife*, the state attempts to nourish new business groups or urge existing entrepreneurial groups to venture into more challenging kinds of production or expand into a new sector. Through the use of sector-specific financial incentives, public procurement and strategic alliances with foreign partners who have access to new technologies, the government seeks to create a strong set of locally owned firms and build up a broad range of related industrial competencies. The successful catch up strategy of Korean manufacturers to become suppliers to the leading American IT-companies, facilitated by the supportive role of the Korean state, is an example of midwifery. The fourth subcategory *husbandry* exhibits a combination of 'support and prodding' (Evans 1995: 81), whereby the state seeks to move private entrepreneurial groups forward within the sector to produce more

technologically complex products. It assists local companies in their internal growth and market expansion by taking on riskier complementary tasks, such as subsidising R&D. If successful in the end, these domestic companies might be strong enough to attract strong transnational allies and share technologies and marketing assets on an equal footing. The eventual success of Korea in becoming a leading nation in the IT-domain and the recognition of firms like Samsung and Goldstar to be treated as equal partners by IBM and AT&T, is an illustration of the husbandry role of the Korean state.

Originally, Johnson (1982) introduced the term 'developmental state' as the appropriate term for industrial development guided by the Japanese government bureaucracy, in opposition to the American 'regulatory' state. The notion of a regulatory state relies on a combination of a market rationale orientation, a commitment to general welfare and allocative efficiency, and a modest 'rule-oriented' role for the government in the economy. Unlike the developmental state, where the bureaucracy directs economic development, the regulatory state does not concern itself with substantive matters (e.g. making decisions about which industries should receive top priority to be promoted or rationalised). The allocation of resources in a market environment should automatically lead to the most efficient and socially desirable outcome. State action should be restricted to setting the forms and procedures of economic competition and protection individuals. In carrying out its rule-making activities, the regulatory state is subject to close parliamentary supervision and the supremacy of law.

The top priority for a developmental state is stimulating the nation's economic effectiveness, measured in growth, productivity and competitiveness objectives. Although developmental states are committed to private property (unlike state planning economies, e.g. Lindblom 1977), their governments set substantive national goals for the economy and identifies long-range industrial priorities for state involvement. Compared with the rule-governed regulatory state, the developmental state is purpose-governed: the direction of economic development and 'industrial catching up with world leaders is determined by an elite economic bureaucracy (e.g. in Japan by the Ministry of International Trade and Industry). The state bureaucracy (or more precise, a 'pilot' economic agency') is often the major source of policy innovation in the political-administrative system and makes most of the decisions (Johnson 1982). The government bureaucracy may use a combination of instruments to realise long-range economic objectives: tariffs, fiscal investment incentives, industrial reorganisation and targeting policies, public enterprises, controls on foreign investment, and so on. Another instrument that played a substantial role in the modernisation of Japan is *administrative guidance*, through which the government effectively fostered a common outlook for the nation's future development. The term 'administrative guidance' refers to bureaucratic coordination through continuous negotiations with industry in numerous consultative institutions and active persuasion to commit private stakeholders to techno-economic advancement by issuing requests, warnings, and suggestions to the key enterprise involved (Johnson 1982: 265-274). Compared to the substantial discretionary authority allocated to the bureaucracy, the supervisory powers of the legislative are weak: in the Japanese budgetary process, for

instance, '(..) *appropriations precede authorisations (..) there was no pretence that the Diet (= Parliament) did anything more than rubber-stamp the bureaucracy's budget* (Johnson 1982: 10)'.

In Western Europe public ownership and (indicative) planning have been the dominant mechanisms in governing the key sectors of the economy. Besides controlling tariffs, entry conditions and market conduct, state intervention in those sectors also made it possible to achieve a variety of other goals such as industrial innovation, employment policy and income redistribution. Ministerial intervention in the day-to-day operations of the nationalised industries and interference with the pricing, personnel and investment decisions of public managers was frequent and all-pervasive. Majone (1994a, b) has identified a failure of nationalised industries, based on the following elements: the capture of public managers by politicians and trade unions, a general overmanning of state monopolies, ambiguous and inconsistent corporate objectives and portfolio, poor coordination among the various public enterprises, and the absence of effective control over public enterprises by Parliament, the courts or the sponsoring Minister. The traditional structures of government ownership and control over the domestic key industries were questioned by powerful ideological, economic and technological forces and, as a consequence, public monopolies were gradually dismantled or radically transformed. This trend towards *de-monopolisation* has changed the role of the state from being a producer of goods and services to that of a regulator whose main function is to ensure that economic actors play according to the agreed rules of the game. In the USA and the UK, the supervision of utilities is the responsibility of independent single-industry commissions, dealing with the regulation of prices, enforcing licenses and ensuring quality of service, supported by transsectoral agencies to safeguard fair competition (Veljanovski 1989, 1991a).[4] Compared with public ownership, characterised by active state intervention and political interference, the regulatory authority is not an acting party in the market, because private ownership is respected, and the execution of its administrative task is insulated from the potentially destabilising effects of short-term party politics, electoral instabilities, and changes in government. In Western Europe there has been a reluctance to rely on specialised, single-purpose administrative agencies; instead, important regulatory functions have been assigned to the departments of the central government or to inter-ministerial committees (Majone 1989b).

West European governments are gradually withdrawing from their active role in the provision of public services and are transferring assets from the public to the private sector. They have granted substantial managerial autonomy to former state enterprises and have separated operational activities from regulatory controls. The drastic policy changes implied a shift towards the liberalisation of the fringe market segments, the corporatisation and (intended) privatisation of the former monopolist and a reform of the institutional structure, in order to avoid the conflicting interests of the

4 The American system of regulating utilities includes the federal level of independent single-industry commissions (e.g. Federal Communications Commission), trans-sectoral anti-trust authorities (e.g. Antitrust Division of the Department of Justice) and the state level of Public Utilities Commissions that regulating several public utilities within individual states.

administration as market player and referee at the same time. The process of liberalising the public utilities refers to the removal of statutory restrictions on market access, herewith encouraging new entry for private sector participants. The traditional state monopolies have often been replaced by a mixture of (more) market-oriented arrangements, such as new entry, the increase of competitive tendering and franchising, the introduction of yardstick competition and competition between different technological modes and capital market competition. Privatisation refers to the idea and practice of the transfer of productive assets from public ownership and control into private ownership through either public offering, management buy out or traded sale (Veljanovski 1989). The decision to privatise has often been motivated by a desire to improve the management of assets of public corporations by reducing government intervention and stimulating efficiency, innovation and customer responsiveness. It often implies a change in the legal form (from public to civil law), a replacement of senior management and a drastic corporate reorganisation. The utilities are transformed from departmental administrations to state-controlled or state-regulated corporations and granted access to capital markets and allowed to develop more flexible personnel policies. Although put at arm's length, the privatised company still has direct linkages with the government, that more often than not remains the key shareholder in the new situation. Public policy objectives, like universal service, price controls, innovation and fair competition are now achieved through different means, for instance through market coordination, administrative regulation and private law techniques. The former two instruments safeguarding the public interest refer to the control of market entry and market behaviour and for the scrutiny of quality of service provision and overall industrial performance. The latter includes bilateral contracts between the government and the franchisee and specific provisions in the articles of association to prevent hostile take-overs or restrict foreign ownership.

In the UK, the Thatcher government used privatisation as a remedy to curtail excessive government intervention and public spending, to attack bureaucracy in public administration, weaken the power of organised labour and achieve a wider spread of property ownership (Veljanovski 1987, 1989). Privatisation programmes are often controversial, time consuming and politically sensitive. Instead of maximising competition, they are often dominated by short-term political objectives (e.g. balancing the budget, and buying votes through pre-election tax cuts) and constrained by the power of incumbents seeking to preserve their network monopolies, and to resist head-on competition and organisational divestitures. The sale of state assets may be used to bring down the level of the government's debt, avoiding future payments of heavy subsidies, attracting private capital to finance basic infrastructural projects, and widening share ownership. Deregulation has been described as the process of reducing state control over an industry or activity so as to make it structurally more responsive to market forces (Baldwin & McCrudden 1987). In practice, however, deregulation often means less restrictive or rigid regulation, rather than no regulation at all. In Western Europe, deregulation at the national level has often been followed by re-regulation at the EC-level. As a consequence, public utilities in Western Europe have lost their pre-existing statutory immunity from the Community's competition legislation and their business activities have become subject to the anti-trust provisions of the Treaty of

Rome. So in the domain of (former) natural monopolies, the question has become how to transform command-and-control legislation, public ownership and political controls over investments and pricing into flexible administrative systems, based on the promotion of incentives and allocative efficiency, and well-designed to ensure additional social objectives (Foster 1992). In the (partially) liberalised and privatised infrastructural industries, the administrative responsibilities of the government are limited to safeguarding the conditions for fair competition, allocating scarce resources, ensuring universal service provision, and adjudicating between market players on such controversial issues as interconnection accounting arrangements.

One could say that European governments have started to emulate the Anglo-American approach towards administrative regulation. Majone (1989b, 1994a,b) has typified the drastic institutional changes in Western Europe as a development from an *interventionist state to a regulatory state*. The interventionist model, based on an active and authoritarian role for the state in the national economy, has been replaced by a regulatory model, in which the state only stipulates the conduct of actors and the conditions under which the economic game is played. Regulation has been described by Selznick (1985: 363) as a *'sustained and focused control exercised by a public agency over activities that are valued by a community'*. The element of 'sustained and focused control by a public agency' implies that regulation is more than merely passing a law; besides rule-making and rule-enforcement it also includes the responsibility of fact-finding in order to monitor these rules. Regulation on the one hand presupposes detailed and independent expertise of the industry to be monitored and, on the other hand, an in-depth involvement in the regulated activity. The requirement of and the reliance on in-depth knowledge in carrying out this regulatory task, will sooner or later, result in the establishment of a specialised administrative agency, which is authorised for regulating a particular industry (Majone 1989b, 1994a,b). These administrative agencies, operating outside the line of hierarchical control or oversight by the central government, are able to provide greater continuity and stability in policy making and implementation, than traditional government departments. The regulatory bodies, combining legislative and judicial powers that have traditionally been kept separate, differ from the central government and the courts by a collegial approach to decision making, an emphasis on professional expertise and political independence. They collect data and expert views on the treatment of special problems and encourage public information and open participation in decision making through the organisation of hearings and the provision of open access channels. The element of 'valued activities' in the definition indicates that the activities to be regulated are considered worthwhile in themselves. The regulatory approach aims at realising a market's potential for furthering allocative efficiency, while at the same time correcting market imperfections through social and economic legislation to ensure objectives like fair competition, price control, consumer protection and universal service provision.

2.4.4 Economic Culture and Ideology

In their response to major challenges such as industrial crisis, innovation and technological developments, industrial policy makers exhibit variations not just over

time and between sectors, but also across nations (e.g. Dyson & Wilks 1983). In explaining these variations Dyson (1983) has proposed that a distinction be made between the objective context of the economic problems that confront various nation-states and the subjective context of contrasting political-legal traditions and industrial cultures. The objective context refers to the domestic industrial structures and to the question whether the industrial structure is well-fitted to accommodate the new technologies and the changing patterns of international markets . The large home market of the USA, for example, provides a dynamic environment for American industry offering economies of scale and permitting specialisation, which in turn enhances flexibility and international competitiveness. The rather small home markets of Western European states like Switzerland and the Netherlands do not offer these scale and flexibility advantages; these small open economies have to develop niche strategies in world markets. By focusing solely on economic and/or technological forces, however, attention is drawn away from the subjective context of socio-cultural routines and legal rules and traditions in government-industry relations, in which industrial policy making is embedded.

The subjective context of legal-political and socio-economic frameworks refers to the prevailing economic ideology, commonly shared norms, networks of interpersonal ties and mutual obligations, and traditions of public authority (Dyson 1983). The variance between national prosperity and industrial strategies pursued by countries (e.g. administrative guidance, social partnership or competitive regulation) cannot explained completely by non-cultural factors like the size and degree of competition in the domestic market, the degree of specialisation in the world economy, power and dependency among the main firms and their stakeholders, and government constraints. National economies not only vary in terms of technological, economic and political capacities, they also show differences in their socio-cultural endowments. In her comparative study on industrial relations and industrial policy in Germany, France and the UK, Lane (1989) has referred to the diverging national systems of industrial democracy, the organisation of work and vocational training and the particular distribution of power within socio-economic institutions in the three countries, and to differences in the style and ideology of management. Fukuyama (1995), for instance, has made it clear, that in addition to the techno-economic imperatives, differences in the levels of trust and sociability inherent in national societies and in the availability of 'social capital' (i.e. the ability to work together for common purposes in groups and organisation) will help to explain differences in economic performance and competitiveness.

There is evidence that culture, loosely defined as a general system of beliefs, norms, values and habits, shared and deep-rooted within the nation, has an impact on the particular structuring of economic activities. Culture is, according to Hampden-Turner & Trompenaars (1995: 4) is 'the invisible hand that regulates economic activity'. The use of cultural variables in organisational and institutional research, however, is complicated and complex. As Child (1981) has pointed out, the concept of culture has rarely been defined, the boundaries of a cultural unit are difficult to define, and the identification of variables as 'cultural' is problematic because of their origin and history. Furthermore, measuring cultural attributes is problematic and too

little effort has been made to specify the subcomponents of culture that are relevant to particular organisations and their members. Although their precise impact may be difficult to determine, cultural factors certainly constrain the selection process of organisational forms by facilitating or inhibiting the formation of different types of governance mechanisms and helping to determine how effective and stable the established (and the new) domestic governance regime is (or will be)(Campbell and Lindberg 1991).

Child (1981: 324) has argued that the most essential definitions of culture all refer to *normative and preferential conditions for action*; the disposition to act in particular ways can be located at the personal level (the ideas, values, norms and meanings shared by members of a social entity) and the collective level (culture as an almost total way of life and socially transmitted behaviour patterns within a community). At the social-psychological level within organisations, Child (1981) has identified the following cultural value orientations: attitude towards human nature (good or evil), man to nature (mastery or subjugation), time orientation (future or past), orientation towards activity (being or doing), and relationships (individual or hierarchical preferences). Although acknowledging the influence of cultural values and norms on the competitive advantage of firms and nations, Porter (1990) sees 'cultural factors' merely as working through the four determinants of his framework. Van Den Bosch & Van Prooijen (1992), for instance, elaborate on the relationship between a country's culture and Porter's diamond of national competitive advantage by referring to the interpenetration of the determinants 'demand conditions' and 'related and supporting industries' and the cultural dimensions strong/weak uncertainty avoidance and 'masculinity' versus 'femininity'.

At the collective level of culture, Lodge (1987) has identified two ideal types of belief systems among countries: the national ideologies of communitarianism and individualism. A national ideology, defined by Lodge (1987: 2/3) as '*the collection of ideas that a community uses to make values explicit in some relevant context*', is often implicit and subtle, and there may be differences between the prevailing ideology and the institutional practices in each country. The impact of ideology on people in society, however, is profound and it rarely undergoes sudden changes (except in situations of crisis, war and revolution). In a communitarian ideology, the (organic) community is seen as more than the sum of its individuals. Equality of result (or hierarchy), social rights and consensus about community needs and priorities (i.e. collective goods) are the dominant ways of directing and governing society. The ideology of individualism reflects an atomistic conceptualisation of society, in which equal opportunities for individuals, competition and the emphasis on contracts and property rights, are the prevailing elements. While the belief system of communitarianism assumes an active state in the coordination and planning of the economy (often in collaboration with recognised domestic organised interests), the individualist ideology thinks in terms of a limited state and active civil society of competing interest groups, all seeking to impose their 'private' priorities on society. In comparing the two ideologies, Lodge (1987) and E. Vogel (1987), found that communitarianism was more coherent and adaptable to its international economic

environment, while individualism was more democratic and entrepreneurial, instigating change in stead of responding to it.

An illustration of the individualism-communitarianism dichotomy can be found in Albert's *Capitalism against Capitalism,* in which he compares the liberal and dynamic Anglo-Saxon economies (the USA and the UK) and the 'social market economy' model of the Rhine/Alpine economies (Germany, Switzerland and to some extent, Japan, the Benelux and the Scandinavian countries).[5] Albert (1991) examines the strengths and weaknesses of these two capitalist models in terms of efficiency and equity, and looks at the feasibility of these alternatives in a modern dynamic environment, that is challenged by ambitious privatisation and deregulation programmes in the Western world, and the downfall of the Communist bloc. After the first age of 'capitalism against the state (1791-1891)' and the second age of 'capitalism disciplined by the state 1891-1991)', Albert argues that we have entered a new period, that could be labelled as 'capitalism instead of the state'. The two capitalist models, the individualistic, short-term-oriented Anglo-Saxon model and the socially responsible longer-term oriented Rhine alternative, rival with each other in terms of political support and commercial success.

The two ideologies have diverging views on the way risk and insurance should be organised and on the best way to anticipate and act on future developments. They also have different conceptions of society and leading institutions, such as the firm and banks/investors. The Anglo-Saxon model promotes the organisation of insurance as a self-regulated market like any other where commodities are traded, and where companies provide a minimum of security and offer competitively priced products. The Rhine/Alpine system conceives of insurance as a narrowly defined quasi-public service, provided by regulated institutions in a moderately competitive environment, but with strong communitarian notions permeating the governance of that industry (e.g. risk sharing, redistribution and solidarity). The Rhine ideology exhibits clear communitarian and egalitarian views, in which communities protect the individual and provide stability for the whole economy. The firm is treated as a (micro-)community of interests, emphasising a social partnership ideology between management, labour, capital (banks) and other relevant stakeholders (e.g. consumers, government). Another important element in the Rhine/Alpine version of capitalism is the longer-term concern of its constituencies for the upgrading of production techniques and substantial investments in training and R&D. At both macro and company level, close attention is paid to future financial commitments. Rhine societies have a high (consumer) savings ratio, producers can borrow easily and at low interest rates from credit-based institutions (often through their *Hausbank),* and governments are determined to spend on education, health, social security and innovation policies. The Anglo-Saxon model is clearly embedded in an individualist ideology, in which narrow individual or private interests take precedence over collective and/or public interests ('an open society'). It assumes an atomised market

5 According to Albert (1991), France is a mixture of elements from Rhine/Alpine capitalism and Anglo-Saxon capitalism. De Jong (1995) has put France, together with Italy and Spain, in a third 'Latin-type' capitalism, that is different from Anglo-Saxon and Continental capitalism (cf. Zysman 1977, 1983).

with no cohesion and no government interference, which is conducive to the release of entrepreneurial spirits and fair competition. In the Anglo-Saxon version of capitalism the firm is treated as a commodity, traded by (potential) shareholders on the stock market. The far-reaching powers of shareholders vis-à-vis management and labour and the concern about the return on investments may have a negative influence on corporate performance: hostile take-overs, corporate raiding (asset stripping), and short-term financial gains can prevail over longer-term viability (e.g. cutting back R&D and training expenses, downsizing).

2.4.5 The Positioning in the International Political-Economic System

The fifth factor, constraining economies in formulating an appropriate policy response to crises and industrial restructuring, is the positioning of a country in the international political and economic system. Nation states are embedded in a world economy and have political and economic affiliations. Governments take critical decisions concerning the strategic location of their key industries in the international division of labour, and display particular preferences towards domestic market access and trade policy. They can also decide to participate in international organisations, dealing with governing (cross-Atlantic) security issues (e.g. NATO), settling (regional) money and capital flows (e.g. Europe's EMS and EMU), regional market integration (e.g. EEC, NAFTA), or establishing global free trade (GATT/WTO). Another institution that has contributed to the internationalisation of business is the multinational company. In industrial and trade policy making, national governments have to take the domestic and foreign interests of both home-based and foreign-based multinational companies into account. If the demands of transnational businesses, they can always threaten to invest somewhere else.

As a consequence of the increasing internationalisation of trade, finance and foreign direct investment from the 1970s onwards, national economies have become more and more integrated into an emerging world economy (Hirst & Thompson 1996). The level of economic and political interdependence between the economies of Japan, the USA and Western Europe has increased sharply over the last 25 years. Sectors like automobiles, financial services, computing and aerospace have become more and more integrated in an emerging global economy with an ever-increasing free flow of information, goods, services, labour and capital around the world. As a consequence of rising R&D costs, converging consumer preferences, the search for economies of scale and new product and/or geographical markets, companies have embarked upon an internationalisation path by expanding their businesses to neighbouring geographical areas or trading regions. In order to serve their customers world-wide, companies need to work together with international partners. The new business creed has become: 'cooperate to compete globally' (Perlmutter & Heenan 1986). A new pattern of technological cooperation and market competition on a world-wide scale has emerged between European, American and Japanese companies, and their supportive governments. Especially in the high technology industries (i.e. micro-electronics and bio-technology), with high R&D expenditures and shortening product-life cycles, globalisation has manifested itself through a myriad of international strategic alliances, joint ventures and other collaborative

agreements (Van Tulder & Junne 1988; Mytelka 1991; Hagedoorn & Schakenraad 1992).

Ohmae (1985; 1991) has stressed that if one wants to operate on a world-wide scale, one needs to operate with international partners. Within the global market a 'Triad' of three important regional markets can be discerned: Japan (and South-East Asia), the USA and Europe. Every enterprise that wants to have a strong position in this Triad, needs to create a direct presence in all three regions. This foothold can be created by establishing strategic alliances, joint ventures, or mergers with local/regional enterprises. By becoming an 'insider' in that regional market, protectionist trade barriers and a hostile business environment are avoided and new economic activities within that region successfully can be developed. As pointed out by Ohmae (1985; 1991), transnational firms must be able to play this *triad power* game of penetrating and strengthening their position on the Japanese, American and European markets simultaneously. The process of *insiderisation* allows for an integration of world-scale activities and decentralised production in the key national markets around the world. This 'triad' logic of international strategic alliances, exemplified by European firms going transnational and becoming insiders in Japan and the USA and Japanese and American corporations in turn moving into Europe, makes it increasingly difficult for national governments to control and manage their domestic industries. The sovereign role of national governments in globalising high-tech industries is challenged, because governments can no longer directly support national champions and domestic industries for employment and/or industrial objectives. In the words of Ohmae (1991: 16): *"Government officials exercise power by regulating and deregulating the market, but their new role is to assume a backseat, not the driver's position, and to make sure that their country is benefiting fully from the best performing corporations and producers in the world, at the lowest possible cost to their people on a long-term basis."*

Ohmae's notion of national economies and nations as species nearing extinction and losing their power and influence both upwards and downwards (to trade bloc or regional, and industrial district or subnational structures, respectively) has been strongly criticised as 'a myth' (Hirst & Thompson 1996). His defence of global free trade as the most effective allocation of resources to the production of goods and services, and his rejection of protectionism, however, overlooks other alternatives that may still be at the disposal of firms and their (home) governments. Globalisation strategies, as followed by multinational companies, allow for economies of scale by locating specific business activities in sites with the strongest perceived country-specific advantages and benefiting from international coordination and control of geographically dispersed activities (Prahalad & Doz 1987; Bartlett & Goshal 1991). When confronted with the superiority of a *hegemon* in the techno-industrial domain and its interest in open trading routes, however, some nation states might decide to pursue strategic industrial and trade policies to foster technological autonomy and eventually develop a solid domestic industrial base. In addition to the possible strategies described above (furthering a global division of labour/production and following domestic sheltering strategies), governments and businesses still have the third option of 'glocalisation' (Ruigrok & Van Tulder 1995) or 'regionalisation'

(Hirst & Thompson 1996). This is a geographically concentrated inter-firm division of labour in the three major trading blocs in order to become relatively immune to trade barriers.

In analysing transnational business groups, Stopford & Strange (1991) draw a distinction between multinational companies and locally operating firms and between host and home governments. Stopford and Strange have modelled today's interdependencies between firms and states and their strategic interactions in as a *triangular diplomacy* by delineating three dimensions of bargaining between states, between firms and between states and firms. The first dimension, interstate diplomacy, exhibits the traditional bargaining among governments striving for power and influence. In the domain of international competition this form of diplomacy leads to rivalry among governments looking to strengthen their national comparative advantage of domestic industries and firms by attracting foreign investments, policy competition and pressing for access to foreign markets for their home firms. The second form of bargaining, interfirm diplomacy, illustrates the competition among firms competing in the world market, the strategic partnering among large conglomerates and the collaboration between multinational enterprises and local firms. Bargaining between states and firms, or industrial diplomacy, focuses on government-industry bargaining. Firms seek permission from national governments to enter protected markets, while national government try to persuade domestic companies to locate their activities at home and attempt to attract investments from foreign companies.

The process of economic integration in Western Europe, which finally gained momentum in the 1980s, has to be seen against the background of an industrial and technological base threatened by fierce competition from the USA and Japan. The trade deficit in high technologies had risen substantially from the 1970s onwards, making Europe increasingly dependent upon the non-European supply of hardware and software for its vital sectors of the economy. The European Commission was confronted with a widening high technology gap between Europe and its major international competitors (Van Tulder & Junne 1988). Especially in the fields of semiconductors, computing and consumer electronics, Europe was clearly lagging behind the USA and Japan. This had to do with structural shortcomings of the European political and industrial system. Before 1986/87, the European Community was still a loosely integrated system of central governments and domestic industries, based on the sovereignty of the nation state and the instruments of the 'national champions' in certain industries and large public procurement programmes (Vernon 1974). Instead of working together at EC level and relying upon the orchestrating role of the Commission in the formulation of industrial policy, domestic governments, business, and trade unions still perceived the national level as the appropriate level to put forward their interests.

The first steps towards a *Europe Sans Frontières* were already taken with the enactment of the Treaty of Rome in 1957, that proposed an elimination of tariff trade barriers, quotas and argued in favour of establishing common internal customs duties and trade policies. These measures were finally implemented in the 1960s and the

overall European customs union was completed in 1969. After a dip in the 1970s, the process of European integration gained momentum with the introduction of the Internal Market-project in 1985 and the Single European Act two years later. These two programmes were aimed at creating a wholly integrated Common Market by 1993, to promote EC policies with regard to advanced technologies and to smoothen EC decision making by subjecting the abolition of trade barriers to majority voting instead of unanimous voting. Before the Internal Market Programme and the Single European Act were launched in the mid-1980s, Europe's political and economic system was weakly organised and loosely integrated. The position of the supranational institutions was weak, compared to the sovereign member states and intergovernmental bodies like the Council of Ministers in which national interests still prevailed. Organised business and labour still perceived the organisation and promotion of industrial activity as a national affair with little influence from the supra-national European institutions (Greenwood *et al.* 1992).[6]

The European business community found itself inadequately equipped to cope with the high technology threat from the US and Japan and the low-end technology threat from the Newly Industrialising Countries with their low cost base and high degree of flexibility. As a consequence of market fragmentation and protectionism, Europe was losing ground to its main competitors in advanced technologies. In order to strengthen Europe's technological base, more collaboration between European companies and concentration of national R&D projects in the EC was needed. The Community-wide R&D programmes were inspired by Japan's industrial targeting approach and an increasing awareness of the growing importance of interfirm collaboration in knowledge-production, standardisation and the reduction of commercial risks. The first large Community-wide research programme was ESPRIT, launched in 1984. ESPRIT was scheduled to combine the IT programmes of the individual member states and to stimulate R&D in the areas of advanced micro-electronics, software development, advanced information processing, office systems and computer integrated manufacturing. The second relevant Community programme was RACE, launched in 1985, and aimed at developing the technologies required for an EC-wide integrated broadband communications system. Another related European research programme was the Eureka initiative. Originally suggested by the French government as an alternative to the American SDI/Starwars plans, Eureka later evolved into a common European programme for stimulating the development and diffusion of high technologies.

The pre-competitive R&D programmes have a built-in danger of becoming squeezed between the regional interests of the EC-institutions and the interests of

6 A large majority of the bigger European firms were, at that time, still national in scope with only little business involvement abroad. A large-scale cross-national venture to rival IBM in Europe, including Philips (NL), Siemens (FRG), and CII (F) merging their computing activities into the Unidata-venture, failed because of domestic political priorities. This far-reaching initiative to create a European champion, established in 1973-74, involved common R&D, the combined production of computers and joint market sharing agreements. The French government, however, torpedoed the pan-European Unidata-project, one year later, to pursue a go-it-alone strategy aimed at developing a national computing champion by consolidating CII with Honeywell-Bull (F/US).

European multinationals acting on world markets, for whom Europe is only one region. Van Tulder & Junne (1988) have raised doubts whether European collaboration in the high technology industries could become a real substitute for intercontinental cooperation. Wassenberg (1991) has criticised the contradictory character of ESPRIT, by arguing that there is an apparent discrepancy between the 'front stage' norm of the outspoken belief in the urgency of European integration, and the 'back stage' praxis of European firms following the logic of global competition and selecting non-European partners. Considering the EC their home base, firms like Siemens, Philips and Thomson followed a 'bigger than Europe'-strategy by forming global alliances in stead of European partnerships. An illustration of this can be found in the merger between the telecommunications division of Philips with AT&T in 1982/83, at the same time when Philips was lobbying for furthering European economic integration.

Most of the reasons for Europe's inability to compete with its global rivals had to do with the dominant national outlook: the markets within the Community were highly fragmented, R&D was duplicated, and the dispersed European industry failed to achieve sufficient economies of scale to compete internationally. Although superior in R&D, the Community was slow in bringing these innovations to predominantly domestically integrated markets. According to European business (ERT 1985), the Community's overregulated business environment hampered international competition even further with high wages, social benefits, strict working conditions and high tax economies. The main goal of the business community became the stimulation of European integration, to be created by an internal market, the convergence of regulations, and a general business environment promoting flexibility and economies of scale and in which cross-border industrial activities (e.g. the abolition of internal trade barriers, the promotion of cross-border mergers) would be facilitated. From 1984/85 onwards, the idea of greater economic integration was actively supported by the European business community, leading to the creation of major European-based multinationals whose size and international affiliation were well beyond the control of national authorities (Sharp 1990).

The existence of a considerable gap between the 'advanced' American and Japanese technology and Europe's lagging capabilities, clearly showed the need for a Community-wide approach. In its plea for furthering European economic integration, business was supported by the Community's supranational institutions: the Commission, Parliament and the Court of Justice. The Commission's institutional support for the proposals launched by European business, was inspired by its motive to increase its general influence on European policy making: the demands of European business would support the Commission in its effort to persuade the Council of Ministers to accept its White Paper on the Internal Market and to advance economic and monetary union (CEC 1985). Within the European Parliament, the idea for economic integration was also supported, as it was hoped that the implementation of the Internal Market Programme would help to reform the institutional structure of the European Community. The Internal Market Programme suited the Members of the European Parliament, who wanted to reform the Community by restricting the influence of member states (i.e. Council of Ministers) and giving the European

Parliament more political influence. The European Court of Justice, watching over the enforcement of the Treaty of Rome (1957), had by that time established a solid legal base for a Common European Market. Originally the jurisdiction of the EEC-rules over national legislation existed only in theory, but in the seventies and eighties the Court of Justice gradually increased its influence. The Internal Market programme, implying a practical interpretation of the Treaty's objectives, officially recognised the exclusive jurisdiction of the Commission and the Court of Justice in EC competition policy and Internal Market affairs.

2.5 *Summary*

Traditional public policy theorists have conceived of the political decision making process as a self-contained phenomenon illuminating certain national or sectoral styles, idiosyncratic traits and situational contingencies. The national style approach argues that differentiation exists within sectors across nations and convergence across sectors within nations. Every nation state exhibits a unique mix of economic, political, social and historical elements, which make up its distinctive framework for policy making. The policy sector approach denies that there is a single policy making process, but, instead accentuates the existence of numerous relatively narrow and self-contained policy making sub-systems. This approach argues that the style of policy making and the nature of political conflict in a country will vary significantly from sector to sector and policy making in particular sectors will exhibit strong similarities whatever its national context. The main relevance of this theory for our cross-national study lies in the distinction between convergent sectoral styles and divergent national styles. Two alternative reactions of nation states and industrial sectors to international pressures have been discussed: techno-globalism, emphasising both international competition and transnational collaboration, versus techno-nationalism, respecting national sovereignty and protecting domestic interests. The aim of this research is to compare the policy responses of three countries, namely the UK, France, and the Netherlands, to the same stimulus of restructuring international telecommunications.

This chapter has furthermore provided theories and insights on comparative policy studies in general and industrial policy in particular, that have a direct relevance for our study. The nations chosen in this research exhibit basic differences in inherited attitudes toward governmental initiatives and intervention in the national economy in formulating a response to international techno-economic restructuring. The UK is an example of a regime favouring limits on government power as reflected both in individuals values and in the sharp borders perceived between the public and private spheres. The French and Dutch regimes allow governments more freedom to devise innovative solutions to socio-economic problems. Opposite the Anglo-Saxon minimalist state-conception ('state-less society') we can locate the French maximalist state ('state-society'), where the state intervenes directly in the economy in a bid to protect national industries through neo-mercantilist practices. The state takes a leading role in the structural transformation of the economy: *'l'état développeur'*. The Dutch regime is located somewhere in the middle between the French 'statist' regime

and the British 'liberal' regime. Like Sweden, the Netherlands subscribe to a social-partnership ideology, where policy making occurs by way of a concentrated system of interest representation, and mutual coordination of conflicting objectives through continuous negotiations between the government and shared public/private responsibilities in policy formation and implementation.

We have extended our research model, as formulated in Chapter 1, to explain industrial adjustment policies to international economic restructuring in telecommunications on the basis of the literature on comparative government-industry relations and the focusing national institutional variables, as found in the work of Gourevitch (1986). We have refined the national variables, as originally formulated as different kinds of economic adjustment strategies (i.e. market-led, state-led and negotiated-led responses), by discussing additional institutional variables of the countries to be investigated. We have discussed the following five national variables:

- X3a: *production profile*: the policy preferences of societal actors as shaped by the different resource conditions, the size and the open-closed character of their domestic economy;
- X3b: *organisation of interest intermediation*: the framework of interest representation through which intermediate associations have established linkages between societal actors and the state;
- X3c: *structure of the state*: the organisation of the political and the legal-administrative system, and the balance of power between the executive, legislative and judiciary;
- X3d: *economic approach* (ideology and culture): values, norms and blueprints for the socio-economic ordering of society, providing economic motives and social beliefs for societal actors;
- X3e: *the positioning in the international political-economic system*: the place of a particular country in the global economy and its international political and economic affiliations.

3

Structural Forces Challenging the European National Telecommunications Regime

3.1 *Introduction*

For more than a century, a strong consensus prevailed in Western Europe on the provision of telecommunications services as the exclusive responsibility of nation states and the joint provision of international services by the national PTT administrations. The domestic governments stipulated the relevant market conditions, socio-economic issues and trade policy of the industry. The state empowered the PTT with a statutory or *de facto* monopoly and supported the domestic equipment industry through R&D funding, public procurement contracts and export subsidies. The influence of other stakeholders in the telecommunications domain (such as computing firms, large business users and consumers) on policy formulation was restricted. Today's telecommunications has become a market-driven industry, in which the European national economies, regional trading blocs, public operators, service providers, and multinational corporate users are more and more integrated into one global market. The established governance regime has been put under pressure by techno-economic and political-institutional forces. New technologies like cellular radio, cable networks and satellites have effectively challenged the traditional public monopoly. Multinational business users, demanding low-cost, high-quality and one-stop shopping telecommunications services, have successfully lobbied for more flexible and customised facilities from the national PTTs and a more integrated and harmonised European regulatory framework, in which the operational and administrative tasks of the PTTs become disentangled. The internationalisation of the American telecommunications and computing businesses, together with the general retreat of the interventionist state across Western Europe, has made the national public monopoly regime even more obsolete.

The majority of EC member states have prepared their telecommunications sector for international competition by transferring their PTT administration to the private sector and changing its structure from a machine bureaucracy to an internationalising multi-divisional form. The administrations have adopted an enterprise culture, characterised by a more customer-friendly approach, and have started an active search for innovative services, profitable market segments and economies of scale and scope. The bigger companies have embarked upon a strategy of horizontal and vertical integration aimed at both securing their home markets and penetrating new

geographical, product or customer markets. European telecommunications operators have diversified into manufacturing, information services, cable and broadcasting, and they have established new cross-national alliances, that have started to penetrate each other's markets in Europe and elsewhere. There is also a trend towards a global approach aimed at providing world-wide services to large business customers. At the same time, the former PTTs were confronted with competition from computing firms, information services providers, and new network operators (cellular radio, cable companies, satellite service providers), that have entered the telecommunications market.

In this research we will argue that the traditional organisation of the Western European telecommunications industry has been challenged by at least four developments, that have curtailed the development of national sovereign policies[1]:

- *technological (r)evolution*: innovations in information and communication technology leading to a digitisation of all types of information;
- *globalisation and differentiation of communication markets*: boosting growth and differentiation of user demand, sectoral convergence, the rise of multimedia conglomerates;
- *international deregulation:* deregulation in the USA, followed by the UK and Japan;
- *European integration*: Community-wide policies, as developed by EC institutions, constrain the activities of member states' governments and businesses in telecommunications.

Before dealing with these structural imperatives for changing the macro-environment of European telecommunications , we will discuss in section 3.2. the established institutional framework of actors and policies which remained highly stable for almost a century: the domestic monopoly/international cartel model. The aforementioned *four structural forces*, that have undercut the centralised hierarchical model of public telecommunication, will be discussed in the remainder of this chapter: technological (r)evolution (section 3.3), globalisation and differentiation of telecommunications markets (section 3.4), international deregulation (section 3.5), and European integration (section 3.6). Together, these centrifugal forces facilitate the evolution towards a more open, flexible and dynamic telecommunications polity, characterised by the removal of government-imposed entry barriers, the introduction of competition and privatisation, and the emergence of new policy issues, such as open access to the public infrastructure, price and profit regulation, and the safeguarding of universal service.

1 See for example: Noam 1987, 1992; Mansell 1993; Davies 1994; Steinfield *et al* 1994); Woodrow 1991; Sun & Pelkmans 1994, 1995; Majone 1994a; Sauter 1995; and Scott.

3.2 *The Traditional Telecommunications Governance Regime: The Domestic Monopoly/International Cartel Framework*

The telecommunications industry until recently was characterised by a stable and predictable environment, in which technology, institutional patters and decision-making were relatively stable and well-organised. There existed a broad consensus about the organisation of the industry as a national public monopoly, relying upon the collective good of the telecommunications network, the large sunk costs of the infrastructure and a basic orientation to the domestic market. The telecommunications network was operated by a government-controlled monopoly provider, that had the exclusive responsibility to serve everyone without discrimination. Three versions of such a hierarchical governance regime were in use throughout the telecommunications domain across nations: government department, public enterprise or regulated private monopoly. In most West European countries the operation of the telecommunications system was exclusively assigned to a government department or a public enterprise, generally known as the PTT, that had the responsibility for the postal, telegraph and telephone monopolies, and sometimes also for the public money services (giro). These PTTs belonged to the public administration and as such they were subject to strong government interference: revenues went into the treasury and decisions regarding tariffs, investments, capital and labour conditions needed legislative acceptance. Special cases are Belgium and Sweden, that had established separate public monopolies for telecommunications and mail. The second mode refers to the public enterprise regime: in Japan and the UK one public corporation (more or less) separated from the public administration was in charge of operating the telephone system. The third mode is the private regulated monopoly, in which private corporations are given an exclusive license to manage the network and provide the postal, telephone and telegraph services. Illustrations can be found in the US and Canada where private firms were given the exclusive license to function as telephone operators. In the USA, for example, the US the public postal, telephone and telegraph functions were split into three regulated monopolies: a public monopoly for the US Postal Service and two regulated private monopolies, Western Union for telegraphy and AT&T for telephony.

The postal and telecommunications sector has traditionally been characterised by a high degree of government intervention. Besides the concern about strategic industries crucial to national security and safety, state involvement existed for two reasons: the natural monopoly attributes of the postal and telecommunications network and the fact that a nation-wide coverage of these networks would contribute to the socio-economic cohesion of a nation. The economies of scale and the network characteristics of the telecommunications industry generate positive network externalities, in that the value of the telephone service increases as the number of interconnections increases. Furthermore, the telecommunications and mail services were regarded as essential public utilities with an overriding importance for the national economy; they provided socio-economic infrastructures, that, when implemented nation-wide, reached, interconnected and integrated every member into society. The national governments promoted the objective of *universal public service* for mail and telecommunications by an ingenious system of cross-subsidisation, with

telephone services subsidising postal services, long distance calls sponsoring local calls, international calls financing domestic calls (more generally, business use subsidising residential use). Tariff setting in traditional telecommunications has been based on value-of-service pricing, that allowed charging the business customer more than the residential user on the grounds that the service was more valuable to the business customer (Von Weizsäcker 1986). The legitimate use of cross-subsidisation in price-setting on the one hand served to spread the overall costs of enlarging the network to as large as possible and on the other hand defended the national monopoly by referring to the need to prevent cream skimming in the lucrative market segments. So the public telecommunications network was not only a techno-economic system, but also a socio-political system of burden-sharing that promoted the transfer of benefits towards the economically weak in the form of redistribution.

The policy regime of traditional telecommunication, characterised by the provision of a public infrastructure, universal service at the lowest cost, standard price setting and redistribution in charges, has become known as the public monopoly model. To typify the long-standing and protectionist arrangements between domestic public and private actors around the PTT monopoly, Noam coined the term *postal-industrial complex*, referring to a closed system in which government, parliament, the telecommunications administration, the domestic suppliers of telecommunications equipment, the domestic newspaper industry, residential users and the labour unions were involved in a 'rent-seeking' coalition of mutual benefits (Noam 1987,1992). The exclusive position of the PTT was acknowledged on the condition that all the other main stakeholders in the PTT system were allowed to share in the revenues from its services. The cartel-like system was profitable for insiders and, furthermore, its inefficiencies were hidden by the general downward trend in the cost of electronic technology (Noam 1987: 32). Within this regime PTT was the monopolistic network operator and the domestic equipment manufacturer(s) served as its monopsonistic supplier(s). These telecommunications equipment firms were domestically oriented and produced mainly for the domestic market to meet (public) demand for switching and terminal equipment; they had become the preferred supplier(s) of the PTT. The interests of equipment supplier(s) were protected by 'buy domestic policies' and idiosyncratic standards that were set by PTT in narrow collaboration with its established supplier(s) to the exclusion of domestic and foreign outsiders. For governments the PTT monopoly was a major source of revenues for the national treasury; in many countries the PTT was seen as *the goose with the golden eggs* that helped to settle the government's budget deficit. The PTT configuration also received strong support from within the political system from the social-democratic fractions in government and parliament, and from trade unions, whose material and ideological interests lay in policy objectives like the redistribution of charges, universal service, employment & job security and industrial policy. The interests of households were also incorporated in this postal-industrial complex; the revenues of long-distance telecommunications were redistributed and used to subsidise the local telephone costs of residential users. The domestic newspaper industry also belonged to the postal-industrial complex, because its postal, telephone, and telex expenses were heavily subsidised.

As the monopolistic provider of the telecommunications infrastructure, services and terminal equipment, PTT had to meet two ambiguous goals: it had to perform reasonably well economically and technically, and at the same time a universal public service. The performance of PTT was furthermore hampered by the difficulty of managing internal dependencies between the growing and capital-intensive telecommunications and the saturating and labour-intensive postal subsidiaries. It was common practice within the PTT administration, for the flourishing telecommunications subsidiary to sponsor the loss-making mail subsidiary. Externally, the PTTs were confronted with national governments using the telecommunications revenues to reduce the government's budget deficit, while on the other hand refusing PTT the necessary investment funds for upgrading its networks. The long waiting lists for telephone connections, that existed in the 1970s in Western Europe were partly due to the inefficiencies within the then overtly bureaucratic PTT administrations and the difficulties PTTs had in carrying out their daily activities, due to government interference.

Like the railways, the PTT administration was, a single-service organisation with a strong technocratic and engineering orientation. Both the corporate strategy of the PTT-organisation and the national telecommunications policy were devised by technical experts, rather than politicians and largely escaped public scrutiny (Noam 1987; Mansell 1993). Traditionally, PTT's orientation towards its customers could be characterised as rather paternalistic and household-oriented. Its view on telecommunications management has essentially been that of an engineer, with heavy emphasis on technical performance, long-term planning, economies of scale and scope, system integration and centrally coordinated end-to-end services. Basically, PTT offered standard homogeneous services (telephone and mail) to the general public with a rate structure that favoured of burden sharing: long distance calls subsidised calls within low density (rural areas) and high installation costs (especially for households) would have precluded the establishment of such a service. The system of burden sharing had encouraged the development of a rather general and paternalistic attitude toward its customers. The services provided were at least standard and average, whereby any special demands on the part of the business community were largely ignored. The rather rigid and inflexible attitude towards business users changed in the late 1970s when the markets for mere telephone services became saturated and demand for data processing services from professional and business users started to grow rapidly. After the objective of universal availability of POTS (= Plain Old Telephony Services) was achieved, PTT developed a diversification strategy by extending its range to PANS (= Pretty Amazing New Services), including teletex, datacommunications facilities, videotex, fax, electronic mail, electronic data interchange, etc.

Apart from its pivotal position in the governance regime, much of the PTT's influence came from allowing other groups of society to share in its monopoly revenues. The huge procurement contracts of switching and network equipment by the PTT provided a large market for the domestic equipment industry in which maximum economies of scale could be achieved. The relationship between the PTT and the equipment industry in designing and manufacturing network equipment had

developed into long-standing and close arrangements. Transaction-specific investments in network engineering and interoperability, and standard setting, reinforced by restrictive government procurement policies, had produced a monopsonistic market with PTT as the primary buyer and the domestic equipment industry as its sole supplier. The highly concentrated market for public switching equipment was being protected from foreign competition by a variety of measures, that safeguarded the position of the domestic supplier(s): national preferences, joint research and development and the setting of common standards. The main justification for these non-tariff trade barriers in the network equipment market was the classic mercantilist argument of protecting the domestic production of high technologies from outside competition. Often justified by technological autonomy and national security reasons, the strategic telecommunications technologies needed to be developed at home and had to be supported and protected by 'buy domestic policies' and idiosyncratic standards. The consequence of such a politicised market environment and the tight quasi-vertically integrated links between the PTT and one or two manufacturers was that the prices of the equipment the PTTs purchased, were too high and the quality too low (Dang Nguyen 1986). Examples of such quasi-vertical relationships between national PTTs and its domestic equipment manufacturers were: Philips & the Dutch PTT, Ericsson & Televerket/Telia (Sweden), GEC and Plessey & British Telecom, CIT-Alcatel & France Télécom, and Siemens & Deutsche Bundespost.

Other stakeholders in the postal-industrial complex were the labour unions, left-wing cabinets and government in general. The PTT-administration and the equipment firm(s) ranked among the largest national employers with relatively high levels of union membership. On the basis of such a strong representational basis the labour unions had established a close relationship with the PTT-administration and the domestic equipment industry. As a consequence, the PTT employees and the workers of the equipment manufacturers enjoyed relatively high levels of job security and salaries. To left-wing cabinets the PTT, as a public corporation in a key industry, was relevant in the formation and implementation of technological and industrial policies. With its vast procurement budgets and huge labour forces, PTT was one of the largest investors and employers in the country. Traditionally, government involvement in telecommunications has been extensive . The reasons for this high degree of state intervention were manifold. Besides the natural monopoly character of the telecommunications network, governments regarded the telecommunications infrastructure as strategically important for both the national economy and national defence/security. Sometimes the PTT was used by government as a means to accomplishing other policy objectives: competition policies, industrial and informatisation policies, macro-economic policies, employment and regional policies. The centralised and hierarchical telecommunications network enjoyed broad public and political approval, because it supported the concept of public service: universal in reach, common carrier-based in access, price-controlled by necessity and redistributive with regards to its charges (Noam 1987). In exchange for their monopoly status, the telephone administrations were obliged to extend service to all. Therefore consumers, small firms, the self-employed and rural communities

supported the PTT-system because they feared that a liberalised regime would threaten the subsidy of their service. Consumer organisations, the chambers of commerce, employer associations and labour unions were directly represented in a corporatist framework of various advisory and consultative councils for PTT Affairs. The poor and the elderly played a mere token role in the policy making process, as symbols of the universal service character of the telecommunications network.

The office equipment manufacturers and dataprocessing industry have remained somewhat outside the postal-industrial complex, at least in the past. In the last two decades the PTTs have been able to draw some of them into their dominant coalition of organisations by giving them a key role in the introduction of office automation and the upgrading of dataprocessing facilities in the PTT administration. For the computer industry, PTT has been a highly valued customer with a solid financial backbone, but also a (potential) competitor. As we will see later on, the computing industry maintained a position that proved strategically important on the periphery of the postal-industrial complex. They served another big group of customers who were left out of the postal-industrial coalition: big business users of such as banks, news agencies, publishers, insurance companies, airline companies and other big multinationals with subsidiaries all over the world and so forth. These businesses demanded cheap international calls, customised (data)communications facilities and flexible regulations; demands that at that time could hardly be met by the PTTs. To these large users telecommunications has simply grown too important, i.e. in terms of corporate strategy and costs, to be regulated in the traditional way. Rather than be made subject to the vagaries of monopolistic pricing by a public telephone company, that offered mainly conventional telephone services, large business users slowly started to develop their own telecommunications links and operated their own private networks or leased them at low and stable rates from new service providers like IBM, GM/EDS and General Electric Information Services (GEIS).

The national network providers jointly controlled the market for international telecommunications services. The point-to-point nature of international telephone, telex and telegraph services had fostered a bilateral governance mode, based on the conception of international telecommunications as a jointly provided service. The provision of cross-border communications services was regarded as the result of a joint investment by the carriers of origin, transit (or through-traffic) and ultimate destination. Besides being exclusively responsible for the provision and operation of the domestic network, the national PTTs were joint monopolists in the operation and management of global telecommunications services. The rates for international calls and the division of revenues were negotiated by the two national network operators involved in establishing the link. These *accounting rates* for administering cross-border communications between the PTTs have been important in the subsidisation of the domestic postal-industrial complex.

Besides through bilateral agreements, international telecommunications has also been organised through multilateral arrangements between public network operators, negotiated within the *Conférence Européenne des Postes et Télécommunications* (CEPT), the *International Satellite Communications Organisation* (Intelsat) and the

International Telecommunications Union (ITU)(Aronson & Cowhey 1988). CEPT is the platform of 26 European PTT administrations, that seeks to ensure cooperation between the national PTTs in setting standards and developing new services in the post and telecommunications domain. Intelsat is an international consortium made up of all the major national telecommunications companies in the world, dealing with international satellite communications ('a carrier's carrier'). Intelsat is both the owner and regulator of the system for international satellite communications. The ITU is the key intergovernmental organisation to monitor and ensure the interconnection and interoperability of national systems in international communications on a technical and administrative basis. As an agency of the United Nations, the ITU is intended to maintain and extend economic cooperation between its 150 member states in all fields of telecommunication, like developing recommendations about standards and tariffs, allocating frequencies, and coordinating the development of telecommunications network and facilities (Renaud 1990; Cowhey 1990). Together, these intergovernmental bodies functioned as a kind of platform, where telecommunications officials and PTT engineers met regularly to facilitate international telecommunications traffic by agreeing upon standards, tariffs and regulations. Decision making and coordination in these bodies has always been slow, exclusive and complex. Due to the intergovernmental character of these bodies, stressing voluntary cooperation, consensus seeking and unanimity between sovereign nations, the role of CEPT, the ITU and Intelsat in the coordination of international and European telecommunications has been restricted from the outset.

It may be true that coordination in these bodies was severely restricted, at least the constituent members of these international institutions all agreed on the importance of making international telecommunications beneficial to their domestic postal-industrial complex. For example, the ITU is based on a strict respect for the national sovereignty of its member states, which restricts the scope for ITU-negotiations to issues that go beyond the national domain. Officially, the ITU-negotiations are led by representatives of the nation states, but in practice the influence of PTT administration has always been substantial; PTT engineers would dominate the discussions on technical and regulatory matters. Within the ITU, the International Consultative Committee for Telephone and Telegraph (CCITT) provides a platform for telecommunications officials (and often PTT engineers) from various countries to consult with each other the technical and regulatory matters dealing with enabling cross-border communications and to make recommendations about operating standards, interconnection, tariffication and accounting rates. Cowhey (1990: 176) stated that the ITU/CCITT acted as a virtual telephone cartel for the PTTs: *"The CCITT rules for international commerce in telecommunications services were (..) the anchor of a regime that facilitated bilateral monopolistic bargains, reinforced national monopolies, and limited the rights of private firms in the global market."* In this exclusive regime, entry of new service providers was restricted at both the national and international level. The established network operators furthermore agreed on setting tariffs for international telecommunications high above cost to subsidise domestic telecommunications (i.e. keep the tariffs for local and trunk calls low).

Table 3.1: Stakeholders in the Telecommunications Industry

Level of Activity/ Analysis	Public Operators	Equipment industry	Governments	Labour	Computing industry	Services industry & large users	Consumers
Global level	Concert (BT & MCI), Global One (FT/DBP /Sprint), AT&T/World Source/Unisource etc.	AT&T, NEC, Siemens, Northern Telecom, Alcatel, Ericsson, etc.	GATT/ WTO, OECD, ITU	ILO, PTTI	IBM, DEC, Fujitsu, etc.	SWIFT, Reuters, SITA, etc	-
European level	Atlas, Unisource etc.	Alcatel, Ericsson, Siemens, AT&T etc.	Commission, Council of Ministers, Court of Justice,	ETUC	Olivetti, Siemens, Bull, IBM Europe, etc.	European Roundtable of Industrialists, etc	BEUC, etc
National level	PTT (NL), PTT/ DRGIPTT (F) General Post Office (UK)	Alcatel (F), GEC/Plessey (UK), Philips (NL)	Cabinets (executive), Parliament (legislative) and the Courts (judiciary)	civil servants, employees in manufacturing	National champions (Bull Philips, ICL) and new entry of IBM, DEC etc.	financial industries, publishers	Consumentenbond (NL), National Consumer Council & Consumers Association (UK), AFUTT (F)
Industry level	France Télécom, PTT Telecom (NL), British Telecom; also SFR, C&W /Mercury etc.	AT&T (NL), Alcatel NL), Ericsson (NL, UK, F), Siemens (UK)	Telecommunications Department OFTEL	Works Councils			
Issues:	*integration of various domestic networks *diversification into new geographical & product markets	* strengthen market position * while securing protectionists agreements (i.e. preferential purchasing)	* protecting domestic industrial base & employment; * the provision of public services * government proceeds;	* job security, working conditions, wage demands	* sale of telematic systems and services	* advanced services at low cost	* low tariffs, more choice, universal service

In short, the national postal-industrial complex consisted of the major stakeholders in the telecommunications industry, all sharing in the revenues generated by the domestic monopoly of PTT (for an overview of the various national and international

stakeholders in the traditional and newly emerging telecommunications industry, see table 3.1.). The international telecommunications system consisted out of a system of national monopolies embedded in an international market/price cartel centred around the ITU. To qualify the governance regime of telecommunications in general, we will put forward the term *national public monopoly/international cartel*: the conjunction of the domestic monopoly of the national PTTs, their favoured stakeholders in the postal-industrial complex and their exclusive international cartel (or joint monopoly) in cross-border communications. PTTs national monopoly was supported at the international level by a cartel-like way of coordinating cross-border services by the same closed group of monopoly providers, that respected each other's domestic markets. Among themselves the PTTs made exclusive arrangements to share the profitable revenues of cross-national traffic in order to subsidise the major stakeholders in their home market. However, the traditional framework of telecommunications became seriously questioned when the foundations on which the monopoly-cartel regime was built, started to erode by a conjunction of technological, economic, international and institutional developments, which we discuss in the following sections.

3.3 *Technological (R)evolution*

Most Western countries have established separate regulatory regimes for press, broadcasting and telecommunications (Pool 1983). The publishing industry is characterised by a competitive market generally free of government regulation. Public control in print is minimised by a constitutional freedom of expression. In the broadcasting domain, spectrum shortage and persistent socio-cultural norms with regards to social representation, information provision, advertising and so forth, have necessitated governments to intervene through a license-based system. Governments grant franchises to public or private owners of broadcasting facilities to provide point-to-multipoint services; the system is financed by license fees and/or advertising. The traditional common carrier system for telecommunications services provided point-to-point communications on a usage basis. Governments assure universal service and non-discriminatory access by granting a public or regulated monopoly to a common carrier, that was obliged to serve all customers equally. In the last two decades we have seen the emergence of new electronic media, that stand next to and in-between the traditional media of broadcasting, print and telecommunications. Rogers (1986) has discerned three distinctive characteristics of new media: interactivity, a-synchronity and de-massification (segmentation). Interactivity is the capability of new communication systems to respond and talk back to the user: the traditional telephone, teleconferencing networks, videotex systems, electronic messaging systems, computer bulletin boards and interactive cable television are examples of communication systems with a high degree of interactivity. The trait of a-synchronity implies that the new communication technologies have the ability to preserve the message and to receive the message at the individual's convenience. A-synchronity enhances time-shifting: control over time in the communication system moves from the source to the receiver. The de-

massification of mass media represents a shift in control from producer to consumer: new communication technologies are able to respond to and facilitate the decentralisation of all types of information-intensive institutions and allow for certain messages to be exchanged between specialised groups or subcultures within a larger audience.

The new media are not only competing with the old media for attention, but have a persistent influence on the institutional framework within which the traditional media operate: they have blurred the boundaries that existed between press, broadcasting, mail, telecommunications and dataprocessing. Pool (1983) has described this phenomenon the *convergence of modes;* Nora and Minc (1978) have put forward the term *telematics*, the evolution combining and integrating telecommunications with information technology. The convergence between historically separated modes of communication, like broadcasting, publishing, point-to-point communications and dataprocessing, was made possible by the emergence of advanced micro-electronics and digital technologies: sound, text and images can be sampled, compressed, transmitted and processed as digital pulses and carried on the same electronic network. The convergence of computer and telecommunications technologies not only eroded the distinction between voice telephony and datacommunications and between conventional mail and telefax, it also resulted in cost savings and economies of scope for the traditional media.

The technological (r)evolution in the communications industries can be located at least at three levels (Mansell 1993; Davies 1994):

a) transmission technologies: the availability of high capacity fibre optics, in addition to the fixed twisted pair and coax infrastructure, and the emergence of alternative infrastructures, including satellite links, computer networks (local/wide area networks), and microwave or cellular systems;
b) switching technologies: the replacement of electromechanical exchanges by digital switching, and the building of 'intelligence' into networks, make the processing, routing and storing of information more efficient and effective and furthermore allows for the provision of advanced software-based services, such as itemised billing, call back and call forwarding services, credit card validation, private numbering, call identification, and so on;
c) terminal equipment: a convergence of customer terminals into multi-media equipment, the diffusion of intelligent and conditional access technologies (e.g. smart-card, decoders), located in the customer's home.

The first-generation telecommunications infrastructure, consisting of narrow-band networks and electro-mechanical switching technologies, was gradually upgraded to provide in addition to the traditional telephone, telex, teletex and the new data and tele-information services. The large-scale implementation of digital switching and digital local loops in basic networks will create a second generation network by the late 1990s, consisting of a digital network with a large bandwidth offering integrated services (voice, data, text), highspeed data services, electronic mail, and video-conferencing. The introduction in the next decade of fibre-optics and satellites will

make even an integrated broadband services network possible. Such a third generation network will bring the additional facilities of videophony, interactive television, high speed datacommunications and digital television.

In the mid-1980s the European and Japanese PTTs had started to develop a policy for the evolution of a future infrastructure, that would be more efficient and rationalise the increasing costs of providing gateways between the specialised PTT networks. The PTTs launched the outlines for an integration between the separate networks for voice, telegraph and datatransmission and their concomitant telecommunications services within the so-called *Integrated Services Digital Network* (ISDN) for the 1990s, followed by an *Integrated Broadband Communication Network* (IBCN) at the end of the century. These plans were part of a long-run strategy of the national PTTs to upgrade and digitise the public infrastructure, to integrate the various dedicated networks for voice, telex and data, later followed with the integration of cable networks, into a single fully integrated broadband communications system under their control. Such an integrated network should provide all forms of telecommunications and information services: audio, video, high-speed datacommunications services. These plans still reflected the traditional PTT-view of economies of scale and unified public service combined with a more adjusted diversification strategy in that it offered specialised and customised services for the business community on the basis of an integrated network. The plans were originally backed by the national governments, which at that time still supported the leading and privileged role of the PTT's in the development of an integrated communication system for the future. In Europe and Japan there was at first a broad agreement on the extension of PTT's monopoly on this integrated information/communication infrastructure by restricting entry and competition on the network level; competition on the higher levels of value added services (teleservices) competition would be allowed.

It was believed that such a strategy of a 'public electronic highway or information pipe' for the future could offer a competitive edge for the telecommunications industry (PTT and switching manufacturers) over the emerging computing/information industry. The ISDN/IBCN plans foresaw an active and privileged role of the national PTTs in standardisation and service provision. By setting the technical standards for network equipment (in narrow collaboration with their domestic equipment manufacturers) they could easily bring this future communications network under their complete control. The PTTs could furthermore unilaterally stipulate the entry and pricing conditions for the provision of services through the network.

The ISDN/IBCN-plans are very much technologically and long-term oriented and underestimate the impact of contrary technological, economic, international and institutional developments, that could seriously hamper the plans for the future. Next to the trend of integrating all the dedicated and separate networks for voice, data, telex and videotransmission into one electronic pipeline, there is a strong undercurrent which points out a future in which the telecommunications system is a patchwork of public and private, universal, specialised and differentiated networks

(Noam 1987,1992). Information technology also makes a flexible and customised use of the telecommunications network possible by 'unbundling' the functions of information distribution and the provision of teleservices (Mansell 1993). Illustrations of this divergence of modes in communication can be found in the development of private value added networks, leased lines, the resale of channels, separation in regulation between the physical infrastructure, bearer services, dataprocessing services and teleservices etc. Within the information distribution function a further distinction can be made between the physical infrastructure, service capabilities (leased lines), and basic (or bearer) services (telephone, telex and telegraph network). Within the service provision function a distinction can be made between value-added services (electronic mail, EDI) and information (or dataprocessing) services (telebanking on-line databanks). The spread of fibre optics, coax cable, satellites, local & wide area networks, and over-the-air broadcasting next to PTT's infrastructure of fibre optics and copper wires, have redefined the boundaries of previously separated industries, like broadcasting, telecommunications and dataprocessing.

The transmission capacity in long-distance communications over the years has increased dramatically thanks to the proliferation of optical fibre cables and satellites, eventually leading to a surplus of capacity and a steep reduction in tariffs. Transmission capacity was, no longer scarce, nor was it the exclusive domain of the PTTs, setting tariffs high above costs. The development of optic technologies and satellites was accompanied by the emergence of non-PTT service providers, wanting the same rights as the PTT and to build their own private networks or lease capacity from the PTTs and resell it to their customers. The entry of new private service providers and the emerging competition between new distribution networks (satellites, cellular systems, cable networks) as an alternative to the public-switched telephone infrastructure, have seriously challenged the public telecommunications system; the end of spectrum and capacity shortage (i.e. abundance of network capacity) and the growing insensitivity to distance of telecommunications costs have eroded the natural monopoly of the public telecommunications network (Pool 1983, 1990; Noam 1987, 1992). Originally the tariff system was based on a universal system in which the accounting rate was the same no matter which route the call actually followed. But with the arrival of alternative transmission systems, the reason for exclusive intervention by the PTT is no longer valid. The adverse tariff system created sufficient incentives for large business users to bypass the regulated/monopoly system and facilitated the development of private/corporate networks and the emergence of new service providers beyond public control, like MCI, Sprint, GEIS, IBM and GM/EDS, firms that use (and supply) alternative communications facilities and value added network services.

The implementation of these plans supposes a long-term investment, a considerable time lag between the investment and its full commercial benefit and a one-sided dependence on national PTT's (although to some extend supported by their domestic governments) and their preferred suppliers. However, this strategy could be frustrated by current developments towards market diversification, international deregulation and privatisation, that have provoked the erosion of national monopolies

and touched on the exclusive position of the PTT. The present trends toward cost-based pricing and a more business-like approach within the PTT administration have already attacked the system of cross-subsidies. According to the original plans, it would take more than two decades until full penetration of (a subsidised) ISDN network could be expected, but it has become clear by now that there is hardly a universal demand for these new broadband services. It looks as though the implementation of ISDN/IBCN will not be dictated by the average demands from the mass market, but by specific demands from the business community for private value-added network services (VANS) at cost-based prices. Such a one-sided demand pattern might threaten the future integrated communications system under PTT control altogether. A feasible alternative to the centralised and unified ISDN/IBCN-plans is the gradual development towards a system, that as well as supports the notion of integrating the voice, data and telex network and guarantees transparency and openness to other network providers. In stead of the top-down strategy, as suggested by the PTTs, ISDN can also be realised by a bottom-up strategy by linking the various value-added-networks and the PTT-networks into a loosely integrated system. Such an alternative path to achieving a flexible ISDN under public-private control is promoted by the new service providers.

The development of alternative networks at reasonable and competitive costs has caused various countries to question whether a single telecommunications infrastructure remains the most efficient way to utilise resources. The traditional centralised hierarchical public telecommunications network, which has become manifest in the traditional postal industrial complex is now being transformed into a transparent decentralised communications system of various networks, a system that is characterised by openness while at the same time securing competition between services, networks and operators. The key requirement for such an open network system, is that openness of market entry, non-discriminatory access, transparent standards and interconnectivity are guaranteed. Such a network of the future, consisting out of an open federation of subnetworks, has been delineated by Noam (1987: 40): *"The future network concept is one of great institutional, technical, and legal complexity. The network environment will consist of an untidy patchwork of hundreds of subnetworks, serving different geographical regions, customer classes, and service types, with no neat classification or compartmentalisation possible. It includes a hodgepodge of participants, governmental and private, national and regional, general and specialised, narrow and wideband, terrestrial and satellite, tiny and vast, domestic and multinational."*

Information and communication technologies have proved to be *technologies of freedom* (Pool 1983) and *technologies without boundaries* (Pool 1990), that erode the existing national telecommunications monopolies by making transmission almost distance insensitive and hence challenging the existing regulatory frameworks. We can see a convergence between print, telecommunication, computing and broadcasting, that speed up the amount of available distribution channels and capacity. On the other hand, these new systems also make flexible and customised use of the network possible by disentangling the functions of information distribution and the provision of new services. These technological developments have made a

redefinition of the existing boundaries of the telecommunications framework necessary. However, the development of new electronic media does not occur in a vacuum, but in a specific historical, interorganisational and institutional context. It is true that technology is one of the important causes of change in telecommunication, but this does not necessarily mean that it is alone in determining the policy outcome. The influence of technological (r)evolution is in the stimulation of innovations that trigger the marketing of new products and services, and eventually spur policy debate about the organisation of these new markets. Besides technological imperatives, we also have to consider the socio-economic and political-institutional environment, in which technologies are put into practice, decided upon and further elaborated. The telecommunications policies, for a long time stable, were challenged by technological innovations and related market developments, accentuating both international competition as well as international concentration and collaboration. Both the demand and the supply side in the telecommunications industry are becoming a global electronic market place. The ever increasing growth and differentiation of user demand for telecommunications services have given way to the creation of international communication markets together with high R&D costs and shortening product life cycles, which in turn has stimulated the emergence of transnational multi-media conglomerates.

3.4 *Globalisation and Differentiation of Communication Markets*

Besides technological trends, changing market developments in the communications industry and socio-economic developments have made a reconsideration of the existing communication policies necessary. Traditionally the telecommunications market has been a dominant monopoly in which infrastructure, services provision, and peripheral equipment were the exclusive domain of the PTT. The market for network equipment was indirectly dominated by the PTT through its quasi-vertically integrated relationship with its preferred suppliers. This integrated market, dominated so long by the PTT, has fallen apart into several differentiated segments, in which private control and competition have increased substantially. In general, the markets for peripheral equipment, enhanced services (value added networks and information services) and switching equipment were the first to be opened up to more domestic and foreign competition. The control over the physical infrastructure and the basic telecommunications services initially remained the exclusive domain of the PTTs.

The spread of new communication technologies has enabled the development of alternative networks, which has boosted communications capacity and caused a dramatic downfall in tariffs. A major trend in the evolution of communication has been the increase in the sheer quantity of messages transmitted. The volume of information and communication is growing dramatically: along with the growth in voice communications, there is the equally important growth in communication via international data networks, cable channels and satellites. As early as the late 1960s and early 1970s, Porat (1978) and Bell (1979) noticed the shift from an industrial society, characterised by mass production, mass media and mass culture, to a post-industrial society. In such a society, information would be the most important means

of production and a majority of the labour force would be composed of information workers, involved in producing, processing or distributing information and communication technology. The locus of economic activity in these advanced economies had shifted away from manufacturing goods towards information handling; the spectacular rise of knowledge industries that produce and distribute information, rather than goods, illustrates this trend. The telecommunications industry is now complying with the characteristics of a high technology industry: highly educated employees (scientists and engineers), a rapid rate of technological innovation, a high rate of R&D expenditures to sales, a world-wide market for its products and services, and a key sector in the international economy. Porat (1978) pointed out that the US had become an information-based economy: (1) more than 25 percent of the GNP originated in the production, processing, and distribution of information goods and services (the primary information sector); (2) over 21 percent of the GNP originated in the production of information services by the private and public bureaucracies for purely internal uses (the secondary information or overhead sector); (3) more than half of the US work force was classified as 'information workers', holding a job where the production, processing and distribution of symbols is the main activity; (4) this group of workers earned more than 53 percent of all labour income.

The major channels of communications have been separated from each other for a long time, both by technology and by use: phones were used for (tele)conversation, print for the mass distribution of text, and broadcasting transmitted entertainment. Parallel to the convergence of technological modes, Pool (1983), in the arrival of new electronic services like videotex, electronic publishing, datacasting and satellite communication saw a process of sectoral convergence, that eroded the barriers which once existed between common carriers, publishers, broadcasters, and computer companies. Now this picture of three neatly separated single-purpose systems of communication has changed and many of the separations between the different sectors no longer exist: broadcasters have begun to diversify through subsidiaries into common carriage, publishers have ventured into commercial broadcasting and new electronic media like videotex and datanetworks and telecommunications operators have entered into information services and processing activities. A trend towards increased concentration and internationalisation of the communications industry is taking place, characterised by various joint ventures and mergers between publishers, broadcasters, common carriers, cable operators and computing firms. The final result is concentration, cross-ownership and the rise of multinational information & communication conglomerates.

The virtually simultaneous emergence of several different transmission technologies, like cable networks, micro wave, fibre-optic networks, and satellites, has made it extremely difficult for the PTTs to control them all. In order to control the various transmission alternatives, the PTTs sought to assert control in the new areas like datacommunications networks, cable networks and broadcasting networks. The PTTs also faced a market for voice telephony that started to be saturated; by the 1980s, the goal of universal service was largely achieved in Western European countries (OECD 1991). Although the market for public telephony was still the most

important one (more than 70 per cent), the business market for leased lines for corporate networks and private exchange equipment started to grow rapidly. The PTTs turned from basic services for the general public toward advanced business services; they started to develop new services such as videotex, dataprocessing services, value added networks, and videoconferencing. As a consequence the existing structure and the organisational status of the PTTs was put under strain. PTT employees started to see themselves as belonging to a high technology sector and wanted to emulate the computing industry in their salary expectations. The telecommunications division within the PTT-administration felt increasingly constrained by their civil service status in their investments and social policy (recruitment and salary levels) on the one hand and the traditional organisational integration of the postal and the telecommunications services. The telecommunications managers of the PTTs began to recognise that a change in status would give them more flexibility and independence in developing their own corporate policy. Such a *privatisation* would considerably reduce government intervention in their commercial affairs. Also the break-up from the mail division would make an end to the profit-making telecommunications services subsidising the often loss-making postal services.

The current changes in international telecommunications are forcing the public telecommunications administrations to transform themselves from government bureaucracies without any profit orientation into truly commercial corporations (Lera Salso 1990). Nowadays, the PTT's adapt their organisational structure and their tactics and develop new strategies to cope with the new technological, commercial, international and regulatory challenges; they promote productivity, diversification, innovation and awareness of customer's preferences. The PTT's have started to restructure their internal organisations towards more innovation and intrapreneurship by creating business units and profit centres, they diversify into new businesses (e.g. equipment manufacturing, information services, value added network services). They also develop into multinationals by strengthening their international products divisions, acquiring new subsidiaries abroad, and establishing international alliances with other national public operators.

The market for network equipment has been highly protected; every PTT had its own preferred supplier(s) with their own switching systems according to the prevailing national standards. Entry barriers were extremely high. The preferred equipment manufacturers were largely dependent on the investment plans of the PTTs for the expansion of the public telephone system. The stable picture of every country having its own switching systems conforming to national idiosyncratic standards no longer exists; increasing transnationalisation of supply and demand, high R&D-investments in digital exchanges and pressures for international deregulation force domestic equipment vendors to look for new markets. National markets, although still vital for many of the equipment manufacturers, are no longer big enough to cover the R&D costs of developing new digital switches and reaching minimum economies of scale. It has become crucial to win orders outside the home market. Since almost all national equipment manufacturers face the same challenge competition is very intense and a shake-out has been the result. The present minimum

market size in switching equipment to recover R&D and marketing costs is only attained by a few of the present players (notably, AT&T, Northern Telecom, NEC, Siemens, Alcatel, Ericsson) (Roobeek 1988; Roobeek & Broeders 1993). Current digital switches have huge research and development outlays (at more than $1 billion, new technologies can only be developed by companies with a marketing, production and service presence in many national markets. The liberalisation of protected markets has led to major regroupings in the telecommunications equipment industry. There has been a shake out of various big companies who hived off their telecommunications divisions completely (ITT, Philips, GTE) or necessarily or deliberately restricted themselves to specific niches in the market (Alcatel: public switching equipment and Motorola: cellular radio). The remaining national champions have regrouped into international consortia to achieve economies of scale and benefit from different geographical locations, that make them less dependent on their domestic market. As Roobeek (1988; 1993) has noticed, paradoxically, the movement towards liberalisation results in a further concentration in the telecommunications equipment industry (e.g. GTE & Siemens, Alcatel & ITT, Siemens/Plessey/GEC, AT&T & Philips, and Matra/Ericsson/CGCT.

The PTTs loosened the close relationship with their domestic equipment manufacturer(s) by looking for second or third suppliers of switching equipment. By trading with more suppliers, the PTTs became more aware of the often overpriced equipment offered by their traditional supplier(s) and could invite more competitive bids. But although, the ties between the PTTs and their equipment manufacturer(s) will become weaker in the near future, at the moment they are still rather dominant. In the words of Roobeek (1988: 316), the character of the close relationship between the national PTTs and their domestic equipment manufacturer(s) will change from *'a good marriage into a modern living apart together (LAT)-relationship'*. The ties between domestic manufacturers and the national PTTs will nevertheless remain intact for reasons of historical mutual dependency, longer-term contracts, and national idiosyncratic standards. The enduring tight relationship between the PTTs and their monopsonistic supplier(s) is further enhanced by the national governments, which to some extent still protect national markets to some extent for strategic reasons (i.e. industrial policy and national security) through public procurement programmes and large R&D subsidies.

In the past, telecommunications was ancillary to data processing, banking, retailing, manufacturing, publishing and other activities. These days, however, telecommunications has become an important business opportunity to get significant and sustainable competitive advantages by increasing corporate and sectoral efficiency and encouraging the development of new goods and services (Keen 1988; Keen & Cummins 1994). Originally, businesses were mainly interested in reliable telephone and telex services needed for their operational activities, but they gradually discovered that advanced telecommunications systems not only cut communications costs considerably, but also facilitated the coordination between dispersed corporate units, like R&D, marketing, production, distribution and sales (Davies 1994). Besides for furthering operational efficiency, telecommunications systems were also important for increasing business effectiveness; with the help of telecommunications

and computer facilities companies built up specialised telecommunications expertise and started to develop new value added services, like dataprocessing services, financial services, teleshopping, brokerage services, and EDI-services. Some multinationals have succeeded in changing their internal telecommunications network from a cost centre to a profit centre by reselling excess capacity (Merryl Lynch), leveraging in-house services into new markets (GEIS and GM/EDS). Corporate networks of multinational firms allow for the penetration of geographic areas beyond the traditional reach of the firm and beyond national sovereignty (Irwin & Merenda 1989). Telecommunications has enhanced the internal as well as the external coordination of the firm by on the one hand facilitating the further integration of various production functions and by linking the firm with its business environment of dealers, suppliers, contractors, bankers and customers. The management of the companies' internal and external network facilities is sometimes contracted out (i.e. outsourcing) to specialised system integrators like IBM, EDS and DEC.

For large transnational users, like banks, publishers, news agencies and other companies operating transnationally, telecommunications has become one of the biggest corporate expenses. For the international coordination of their activities these large users have developed a specific need for globe-encompassing information services at low costs, leased lines, customised services and tariff-cuts in long-distance telecommunications . However, the requests of these large transnational users could not be met directly within the inclusive PTT-system, which was built on national priorities, stable preferences, burden sharing and cross-subsidisation. In stead of a hodgepodge of national answers to their communication problems and needs, as Schiller (1982: 104) has made clear, *'transnational users wanted transnational solutions'*. In the 1970s and 1980s, the large corporate users organised themselves in national and international interest associations of large customers to further their collective interests vis-à-vis the PTT: in France, CIGREF; in the UK, TMA, and in the Netherlands, BTG; in Europe, ECTUA, and internationally, INTUG. Although their views on pricing and related cost issues differed substantially, the representatives of large corporate users often worked together with traditional consumer organisations, representing the interests of residential customers in the policy process, advocating the promotion of the widest choice of services and facilities (going beyond conventional telephony), to be delivered cheaply and at high quality levels. The large users and specialised service providers were more radical in their political demands: they wanted the removal of legal or tariff barriers hampering transborder traffic and the introduction of cost-based service charges (i.e. an abolition of cross-subsidised pricing with its adverse tariffs for large businesses)(e.g. ECTUA 1987; McKendrick 1987). Consequently the large business users have become an important force in telematics policy making, domestically as well as globally.

The large corporate users developed alternative private systems outside the existing public infrastructure, rationalising their telecommunications costs by building and operating their own (inter)national telecommunications links. Together with new private service providers, such as GEIS, IBM and GM/EDS, the group of transnational users started to seek exclusive control over the nature, diversity, and

costs of their telecommunications services by developing alternative private telecommunications systems. These 'by-pass' networks make use of an internal corporate or branch-like communication system made up out of high-capacity fibre-optics, micro-wave technologies and satellites, supplemented by leased transmission capacity from the PTTs, to meet the increased and customised demand for high-volume dataprocessing services of the large users. Examples of global alternative networks for internal use are: *Societé Internationale de Télécommunications Aéronautiques* (SITA) and *Society for World wide Interbank Financial Telecommunications* (SWIFT), respectively the cooperative networks for airline reservation and international banking services. Large multinational companies with extensive corporate networks, such as IBM/INS, GM/EDS, and GEIS, followed by SWIFT and SITA, have started to use their integrated facilities to provide a variety of advanced services to sophisticated customers.

The telecommunications equipment market is being restructured from various protected domestic markets towards a (more) globally integrated and concentrated market with major mergers and joint ventures between AT&T & Philips, Alcatel/ITT/CGE, Siemens/GTE, GEC/Plessey/Siemens, Matra/Ericsson/CGCT. Apart from the emerging markets in Eastern Europe, the evolving world-market for switching and terminal equipment has become tight, competitive and uncertain. The well-organised character of the domestic equipment market of the PTTs preferred supplier(s) is threatened by the inroads made by foreign equipment suppliers and especially Japanese manufacturers have become strong in business telephone systems, fax machines, and computer gateways. The high R&D costs of developing new digital switches and the reduction of the product life cycle from almost 30 years to 10 years, and the growing importance of software and automation expertise, are reasons to link up with foreign partners and computing companies to have the necessary scale and expertise and rationalise companies by shedding labour (for instance, employment in the European telecommunications equipment sector decreased from 360,000 in 1980 to 250,000 in 1992 (Roobeek & Broeders 1993). Also, in the market for telecommunications services, European PTTs, such as British Telecom, France Telecom, PTT Telecom Netherlands, Telia/Televerket (Sweden), and Bundespost Telekom (Germany) are going beyond their domestic jurisdiction and seek to build up a presence in each other's national markets and form international strategic alliances, such as Unisource, Atlas/Global One, and Concert. In order to secure the economies of scale and provide their multinational customers with complete end-to-end services around the world with one-stop shopping facilities, a combined global/local outlook is needed (e.g. Prahalad & Doz 1987). The newly created 'global carriers' have to respond effectively to local demand (often from their constituents and associated partners), while simultaneously integrating their activities and networks at the global level.

In short, new technologies have eroded and redefined sectoral boundaries; satellites and microwave technologies have opened up possibilities for competition in long-distance services markets. The PTTs monopoly has come under close scrutiny by what Noam (1987, 1992) has called the internationally oriented *'services-information coalition'*. This new influential alliance of large service users and

computer manufacturers, supported by those equipment firms previously excluded from domestic PTT procurement programmes has challenged the established order successfully. As a consequence, the PTTs, policy makers and the protected manufacturing industry have been put under pressure to respond by upgrading the telecommunications network in order to offer highly advanced communications systems and adequate basic and - more importantly - valued added services for specific business users groups. With the rapid growth in the demand for international telecommunications of big corporate users, the powerful lobby of internationally oriented computer manufacturers (IBM, DEC) and the entry of rival carriers like GM/EDS, IBM and GEIS, Noam (1987: 44) is right in considering international telecommunications the *'soft underbelly of the domestic service monopoly'*. The revenues from international telecommunications have always been a major contributor to the traditional system, but with rival service provision, excess capacities, and a drastic reduction of tariffs, the PTTs system of cross-subsidisation has been eroding. The increase of competition in international telecommunications seriously threatens the monopoly-cartel regime. Modern telecommunications is moving in the direction of cost-based pricing, quality and price differentiation, enabling consumers more choice but less equity (Von Weizsäcker 1986). The traditional cost structure of the public network, where business customers used to subsidise residential and rural services and international traffic subsidised domestic communications is being reversed. International and business services will become cheaper and the tariffs of telephone services for residential and rural users may rise.

3.5 *International Deregulation*

Besides the techno-economic imperatives to reconsider traditional telecommunications policies, Western European states were also confronted with far-reaching changes in the international telecommunications regime. The process of deregulation, that had started originally in the USA, followed by the UK and Japan, and increasing international competition, mean another blow to the domestic national monopoly framework.

An important step towards deregulating international telecommunications was made in the early 1980s when the *national champions* of US telecommunications and computing, AT&T and IBM, were both released from their restrictions on penetrating each other's markets. The deregulation in the USA can be seen as an official recognition of the sectoral convergence between telecommunications and computing. The carrying out of deregulatory measures implied, however, more than just instigating domestic competition between the two giants. The bigger aim was to reinforce US techno-economic world-leadership and dominate the fast growing markets of datacommunications and telematics. In order to achieve these objectives, the American government decided to break up the AT&T/Bell system into separate Regional Bell Operating Companies (RBOCs) and a slimmed down AT&T and liberalise the supply of telecommunications equipment and value added network services. AT&T's overall monopoly was replaced by a core monopoly on local

telephony, subdivided to the hived-off RBOCs, and deregulated markets in the provision of long-distance and international services and equipment supply.

Before the break up of AT&T, the American telecommunications industry was organised as a private regulated monopoly, in which the telephone services were provided by AT&T and its associates, also known as the Bell System. This conglomerate consisted of 22 Bell Operating Companies in charge of the local/regional monopolies, the subsidiary AT&T Long Lines (the monopolistic provider of long distance and international telephone services), the famous Bell Laboratories and the vertically integrated equipment manufacturer Western Electric. This private conglomerate was subject to formal regulation, divided between the Public Utility Commissions (PUCs) (acting at the state-level), the independent Federal Communications Commission (FCC), antitrust authorities as located in the Department of Justice, and the courts (Supreme Court). The FCC, installed after the 1934 Communications Act and subject to Congressional scrutiny, was the central administrative body for controlling broadcasting and telecommunication: its regulatory activities consisted of licensing services, price controls and setting limitations in profits. AT&T was prohibited from providing telegram/telex and enhanced telecommunications services. These services were provided by Western Union International, ITT World Communications and RCA Global Communications. The company was also banned from selling switching and terminal equipment abroad; the sale of international telecommunications equipment was left to ITT and GTE.

In the USA the markets for telecommunications and computing had been regulated separately since 1956, when the Department of Justice with its *Consent Decree* envisaged AT&T as a regulated monopoly in telecommunications protected from competitive entry, but at the same time officially prohibited AT&T's entry into computer services. Subsequent legislation attempted to draw increasingly finer lines between telecommunications and computing, leading to a gradual process of deregulation.[2] Until the 1970s, there was essentially no real competition for the AT&T and the Bell carriers in the markets for local and long-distance services. The deregulation of American telecommunications started cautiously in 1959, with the *Above 890* Decision, when the FCC allowed the construction and operation of private micro-wave transmission systems, and the entry of new alternative operators, such as MCI. The approval by the FCC in 1969 of MCI's application for specialised private micro-wave lines opened the door to competition in long-distance communications. According to AT&T, MCI was a cream skimmer: MCI 'bypassed' the national public-switched network and by contributing less to the flow of cross-subsidies it could set its prices for long distance lower than a regulated AT&T/Bell system (Temin 1987; Brock 1994). The next step towards deregulation was the *Carterphone Decision* 1968, in which the FCC stipulated that the Bell System should allow equipment that was not produced by AT&T itself to be connected to its network. The

2 For an historical overview of all the measures, that were attempted to draw even finer lines between telecommunications and computing and finally, leading to regulatory reform in the 1960s and 1970s and AT&T's divestiture in 1984: Schiller 1982; Temin 1987; Brock 1994.

Specialised Common Carrier Decision 1971 was the first step towards developing competition within the Bell system. This measure included the allotment of licenses to specialised common carriers (e.g. MCI), granting them the right to offer switched telecommunications services with direct connection to the existing network of local telephone exchanges.

With the *First Computer Inquiry* of 1971 dataprocessing and information services were removed from traditional common carrier regulation and subjected to competition. AT&T, as regulated common carrier, was allowed to provide data processing services as long as they were offered through a separate corporate subsidiary. The next step towards deregulating America telecommunications was in 1976 when the *Equipment Registration Programme*, was implemented, in which procedures were developed to liberalise the market of terminal equipment. In the *Second Computer Inquiry* of 1980 the FCC abandoned the 1971 decision to treat the regulation of telecommunications and dataprocessing services differently, in favour of an attempt to distinguish between basic transmission services ('common carriage'), not altering the content transmitted, and enhanced (or value added) services, including information and data processing services. Furthermore, the market for terminal equipment was deregulated when AT&T was permitted to enter the market through an independent subsidiary. Although AT&T was still ferociously defending its integrated Bell System, it gradually became clear that the technological changes and market developments, eroding AT&T's monopolies and blurring the boundaries between telecommunications and dataprocessing, needed regulatory adjustment.

With the *Modified Final Judgement* of 1982 many of the distinctions between telecommunications and computers were abandoned in favour of deregulation. It stipulated that in return for divesting itself of its Bell Operating Companies (BOCs) and hence of loosing its monopoly status on local and regional telecommunications , AT&T was allowed to keep its long-distance services, Bell Laboratories and Western Electric (manufacturing). As a *quid pro quo,* AT&T was allowed to enter international telecommunication, as a provider of both services and equipment, and to offer value-added services. The 22 BOCs were reorganised into seven regional carriers, that enjoyed a regulated monopoly for the operation of local ('geographically restricted') networks: Ameritech, Bell Atlantic, Bell South, Nynex, Pacific Telesis, Bell South and US West. These Regional Bell Operating Companies (RBOCs) were required to provide equal access to their networks to other carriers for the provision of non-local services, while they themselves were prevented from providing inter-exchange services, long distance services, information services, cable services and manufacturing equipment. However, with the decision based on the *Third Computer Inquiry* from 1986, the RBOCs were allowed to offer terminal equipment and enhanced services (as part of the condition to provide an open network architecture to allow other providers of enhanced services to interconnect). In the course of the deregulatory process, new carriers like MCI and Sprint continued to make inroads into the markets for long-distance and international voice and data services, taking away traffic from the established international carriers AT&T, ITT, RCA and Western Union. As a compensation for the loss of its monopoly on

international telephone services, AT&T got the right to enter the lucrative markets for value added services in the US (with an exception for electronic publishing) and to sell terminal and switching equipment abroad. In 1991, the market for value-added services was further opened to competition, when also the RBOCs were allowed to provide value added services.

In the *Modified Final Judgement of 1982,* the established rules of keeping the telephone companies out of computing and vice versa were considered no longer viable. The Decree allowed AT&T to enter the fast growing markets of value-added network services, and information services (with the exception of providing electronic publishing services). In addition to its remit as a long-distance and international carrier, the divestiture of the Bell System implied that AT&T's was permitted to enter the lucrative but highly competitive dataprocessing industry. However, computer firms like IBM, GEIS and DEC now were allowed to enter the markets for telecommunications equipment and tele-services as well. In a separate action, the anti-trust suit against IBM was dropped and in 1983 IBM was officially given the permission to enter the markets of telecommunications services and network equipment (Fisher *et al 1983).* AT&T and IBM were both freed then, from their restrictions on penetrating each other's markets and the two giants could compete for the booming markets of value-added network services and information services. Both AT&T and IBM developed diversification strategies, focusing their marketing efforts towards the large business users, who demanded cheap and high-quality leased lines, tailored datanetworks and services, and on long-distance and international communications services.

The decision to deregulate telecommunications was part of a straightforward industrial and trade policy aimed at increasing the efficiency and competitiveness of the US telematics sector (Schiller 1982; Hills 1986; Pool 1990). The US government reorganised its domestic telecommunications industry with the general aim of promoting competition between its domestic telecommunications and computing industry and the transnational giants IBM and AT&T at both the national and global level. The deregulatory policies were part of an explicit strategy of promoting domestic competition as a leverage for the internationally trading position. Domestic telecommunications liberalisation was aimed at stimulating the productivity of the national economy at large and strengthening the competitive position of American industry and thus challenging the dispersed and protected telecommunications markets elsewhere and transforming them into an integrated global market place. With its sheer market size and technological leadership (e.g. in telecommunications R&D, equipment manufacturing, computing, software), a first move to deregulate and encourage competition in the communications industry would strengthen the American position *vis-à-vis* its European and Japanese contenders. Bruce (1981) was right in predicting that regulatory change in US telecommunications would have significant domestic and international implications, affecting all countries. Large American telecommunications firms such as IBM, AT&T, the RBOCs, MCI, GEIS, GM/EDS and Sprint have diversified into various new geographical and product markets, and had an adverse on Japanese and European protectionist policies and practices. The two industrial giants AT&T and IBM were stimulated to extend their

domestic service to support the business interests of large American firms abroad to provide them the necessary and cheap communications facilities to operate multinationally.

The preservation of Bell Laboratories and Western Electric as integral parts of AT&T as expressed in the Modified Final Judgement and the abandoning of the anti-trust suit against IBM, indicates that domestic deregulation was just an leverage instrument in maintaining America's world leadership in telematics. A vertically integrated AT&T could have international competitive advantage both as an equipment and a network supplier with Bell Labs R&D expertise, Western Electric's manufacturing capabilities and a computing division in the making. After its divestiture AT&T reacted with establishing a large interorganisational web of joint ventures, participations and acquisitions to complement AT&T's shortcomings in computing and to assure access to protected markets. After its divestiture in 1984, AT&T got a foothold in the European Community with joint ventures with Dutch, Italian and Spanish companies in the early and mid-1980s. The telecommunications subsidiary of Philips Netherlands, a medium-sized equipment manufacturer, did not have the sufficient scale to continue in the ongoing rat race of developing public switching equipment and teamed up with AT&T. Later the American-Dutch venture was fully incorporated in the larger AT&T organisation. In Italy, AT&T linked up with the computing firm Olivetti and Italtel, the domestic equipment manufacturer. Another involvement of AT&T in Europe was the agreement with the Spanish operator Telefonica. The acquisition of NCR in 1990 gave the impression that AT&T wanted to strengthen its position in the computing even further.

AT&T's rival, IBM, is actively moving the other way round, diversifying from computing to telecommunication, but with the same intention to seek control over the converging computing and telecommunications technologies. From its strong foothold in computing and value added services, IBM moved into telecommunications service provision and equipment manufacturing. It established relationships with the long-distance and international carrier MCI, with the equipment firm Rolm (an American PABX-manufacturer), and set up its own Satellite Business System (SBS) to provide fast datacommunications services. After a decade, however, most of these investments and joint ventures of AT&T and IBM in new technologies and across sector boundaries have been discontinued; after having generated substantial losses and difficulties to integrate activities. AT&T predominantly focused on telecommunications equipment supply and international services provision (in close collaboration with a group of Asian and European PTOs) and started to sell off or rationalise the majority of its stakes in the computing industry and non-domestic equipment manufacturing abroad. In the late 1980s, IBM narrowed its strategic focus on its core computing business and sold its participations in telecommunications service provision (MCI) and equipment manufacturing (Rolm).

One of the consequences of deregulation was that the American market became open to foreign participation. The USA was (and still is) by far the biggest integrated telecommunications market (in terms of equipment and services) in the world.

However, the structure of the American equipment market changed slightly in the 1970s with rising imports (mainly of terminal equipment) from Japan and the Far East, decreasing market shares for its domestic producers, lagging exports and a worsening trade balance. American anxiety over the increasing importance of the steadily growing market shares of Japanese firms in the American domestic market for information technology and micro-electronics, together with the protectionist nature of the Japanese market, were underlying factors of a high-risk strategy to free IBM and AT&T from their anti-trust constraints (Tunstall 1986). The bigger goal of deregulation was that it would not only make US industry more competitive at home, but also strengthen its position on the world market. It was believed that international competition in an open market place was the best way to combat European and Japanese protectionism. Although deregulation in US telecommunications gave foreign firms the right to invest in the American economy, the position of the US in the various segments of the telecommunications market at that time was so dominant that foreign investment did not pose a real threat. It was only in the telecommunications equipment market that the American firms lost some ground to Canadian, European and Japanese firms. The opening up of its domestic markets to non-American firms gave the American government and firms the right of reciprocity to push for deregulating telecommunications elsewhere and in turn enter the European and Japanese markets. A large US business user group formulated it as follows: *'international telecommunications provides the pipeline which enables US industry to extend its enterprise to the vast world markets'*.[3] The focus of attention from a US point of view were the entry barriers erected by other countries; notably the member states of the EC and Japan, with their restrictive government procurement policies, and preferred treatment of domestic firms in the approval of equipment.

In the US deregulation was used as an explicit industrial policy, promoting on the one hand competition and efficiency gains in the domestic market and on the other hand pressing for international liberalisation for its internationally leading industries. The unilateral policy followed by the Americans of extending deregulation of domestic telecommunications into the international market was, as Hills (1986) has pointed out, an attempt to impose its domestic policy on the world and hence enforce American law on a global scale. The strategy of accompanying domestic deregulation with intensified international competition turned out to be effective. The deregulation strategy was successfully exported to the United Kingdom and Japan, and the Americans contributed to putting liberalisation and regulatory reform on the agenda in Europe and eventually the cutting back of protectionist measures in the sheltered European markets in the early 1990s. The leverage of domestic deregulation to improve its positioning in the international markets as well made that the lead the Americans already had already in satellite transmission, value-added services and information products even became reinforced (e.g. Communications Week International, 20 September 1993).

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3 Stated by the International Communications Associations, the largest US business user group. In Schiller 1982b: 99.

The move of the US government to deregulate its domestic telecommunications industry was designed in order to strengthen the competitive advantage of the American economy *vis-à-vis* the Japanese and to try to export the deregulatory model and persuade other governments to follow. The move was quickly thereafter followed by the United Kingdom and Japan, who in turn also wanted to secure their position in international telecommunications and started to liberalise their domestic markets for telecommunications equipment and services and privatised their PTTs in the mid-eighties. The liberalisation of telecommunications in the USA, UK and Japan put pressure on European states to respond adequately in order to secure their international competitiveness in the global telecommunications economy. The fact that the step of the US deregulating their telecommunications was quickly followed by the governments of Japan and the United Kingdom and seriously evaluated in Western Europe, illustrated according to Pool (1990: 206), the *'geo political advantages of communications leadership' of the US in the global information economy*. Confronted with the (international) deregulation policies of the world leader in telecommunications market, followed by two other leading countries, many Western European countries realised that a revision of their traditional policies and institutional structures was inevitable.

Today the trend in international telecommunications is towards increased competition between competing public and private service providers, and between rivalling global or regional carriers. For decades, the rules set by the ITU and CEPT for the joint provision of international services were appropriate for a stable environment, where technology was changing gradually, demand for services was predictable and largely domestically confined,, and roughly similar regulatory conditions for service provisions. In the early 1980s the ITU and CEPT were confronted with various technical possibilities to (re-)route communications flows around the globe to circumvent regulatory barriers and restrictive practices in particular countries, and increasing competition in cross-border service provision. The global and European cartels in administering international services, ITU and CEPT, were challenged by alternative institutions, that promoted divergent perspectives on commercial policy and standards setting. According to Rutkowski (1991), even the regulatory world is becoming institutionally competitive. The General Agreement on Tariffs and Trade (GATT), the European Commission (see below), the European Telecommunications Standards Institute (ETSI), and the International Standards Organisation (ISO), have joined the ITU at the centre of regulating and standardising international telecommunications. The new international institutions represent a different and broader perspective on international telecommunications, seeking to guarantee free trade and open access to standardisation.

In the past the regimes of international telecommunications and international trade were different, but from the late 1970s onwards, American policy makers acknowledged that the international telecommunications services were indispensable in a global trading system. Irritated by protective measures in Europe and Japan (e.g. public procurement, idiosyncratic standards setting, cross-subsidies), the Americans strongly advocated the provision of international services to become subject to the

GATT's jurisdiction (Woodrow 1991). Since 1986, when agreement was reached to include trade in services in the GATT-framework, the liberalisation of international telecommunications services has emerged as a politically sensitive issue in negotiations in the GATT and its successor, the World Trade Organisation (WTO).The role of the ITU in the standards domain has been challenged by the emergence of regional standards setting bodies, like ETSI (Europe), T1 (USA) and TTC (Japan), and the increased importance of the ISO at the world level (Besen & Farrell 1991). For a long time, standards setting in telecommunications was the responsibility of national administrations, supported and legitimated internationally by the ITU. Over the years, the convergence of telecommunications, computing and broadcasting, and the increased internationalisation of technologies and markets, facilitated an alternative and more open three-tiered regime: the ISO (i.e. the International Electrotechnical Commission), the three regional standards organisations, and national standards bodies.

3.6 *European Integration*

Before the publication of the 1987 Green Paper, preparing the ground for liberalisation in the European Community's member states, the governance of the European telecommunications sector was regarded as a matter of national sovereignty and organised through a public monopoly. Although the articles of the EC Treaty could have been applied earlier to the telecommunications area (as a 'service', one of the free movement categories, and subject to the competition provisions), it was only in the early 1980s when the EC institutions became actively involved, when linking it with the overall objectives of the Community (i.e. industrial, competition and commercial policy). The legal reason that caused a 'moratorium in the application of European law to telecommunications between 1957 and 1987' and protected the sector from competition and the EC public procurement regime, (Sauter 1995: 95) was found in article 90 of the EC Treaty). This key provision referred to public undertakings entrusted with the operation of key economic services to which member states granted special rights (Scott 1994). As argued by Scott (1994), the EC Treaty is contradictory as applied to the utilities and telecommunications sectors: on the one hand the Treaty supports free movement principles and the internal market objective and on the other hand, it advocates the goals of coordination and integration to foster R&D and network development (as then justified by the natural monopoly argument). Sauter has summarised the relationship between the telecommunications administrations and policies and European law in the pre-Green Paper period: *'the PTTs were (under Community law excluded de jure from the liberalisation of public procurement, and de facto from the application of competition policy'*(Sauter 1995: 96).

When the European Economic Community EEC was established in 1957, a Permanent Secretariat was established to coordinate the postal and telegraph policies. In September 1958 the PTT Ministers of the six EEC member states discussed two options regarding a future European postal and telecommunications system. The first alternative included the integration of postal and telecommunications policy into the

European Economic Community on the basis of Article 235 of the Treaty of Rome. The second referred to the creation of an independent European Postal and Telecommunications Union, that would operate separately from the EEC. Although originally a clear preference was expressed for the first option, it was decided that an autonomous association would be created, that would include -besides the six EC member states- other European countries as well. In March 1959 the CEPT was established, containing the large majority of the European PTTs. The policy shift from a tight to a loose European integration in PTT matters was caused partly by growing political resistance from the French to a creeping supranationalism. Furthermore, pan-European collaboration would allow the participation of dominant nations in the postal and telecommunications domain, like Great Britain, Switzerland and the Scandinavian countries (Dang N'Guyen 1986; Schneider & Werle 1990).

The consensus among the member states to regard the postal services and telecommunications as a national affair excluded from EC-legislation, was upheld for more than twenty years. An interval of 13 years between the first and the second meeting of PTT Ministers (1964-77) and the fact that the discussions mainly dealt with the harmonisation of postal tariffs, gave the impression that the formulation of a common telecommunications policy was a non-issue. At the end of the 1970s, when large American and Japanese electronics companies started to challenge Europe's autonomous technological base, the European Commission and Parliament proposed some measures to increase the powers of the Commission *vis-à-vis* the member states, as represented in the Council of Ministers, and to link telecommunications policy to overall industrial policy objectives. The Commission drew attention to the importance of information and communications technologies in general and Europe's major weakness in information technology and micro-electronics and its relative strength in telecommunications . The meeting of the Council of PTT Ministers in 1977 and the consequent creation of a Working Group on Future Networks by the Commission and the CEPT, were the first official steps in preparing a common telecommunications policy. The Council of Ministers recognised four domains where Community action was needed: the respective role of public authorities and the private sector in telecommunications , price trends for networks and services, and the coordination of research and development projects. Telecommunications policy was linked to broader industrial policy objectives to meet the challenge of new technologies and to catch up with the USA and Japan. In 1979-80 the Commission developed a comprehensive strategy, aimed at improving the qualifications of the European work force, the creation of a common market for telematic services, the establishment of a strong European information industry and the fostering of coordination and cooperation between producers and end-users. The active involvement of the Commission even led to four draft proposals, demanding efforts to harmonise the telecommunications industry, to open 10 per cent of public procurement, to introduce new services and to create a common market for terminal equipment (Ramsey 1981).

In the early 1980s the world-wide telecommunications industry was clearly in turmoil: the dominant monopoly regime had already been questioned in the USA, Japan and the UK (Hills 1986). These three countries had embarked upon a market-

driven strategy for the telecommunications sector by liberalising the markets for equipment and value-added services and restructuring the domestic operator (through an organisational divestiture of AT&T in the US and the privatisation of BT and NTT in the UK and Japan). The Commission was aware of the American and Japanese challenge and the vulnerability of Europe's telecommunications industry: in a highly fragmented market with a plethora of incompatible standards domestic markets were protected by preferential treatment for local producers, and the industry's depended on Europe's weak information technology base (semiconductors and computing)(CEC 1984). The Community responded by developing a joint telecommunications policy that would increase its competitiveness by supporting joint R&D programmes and standardising new technologies in close cooperation with the national authorities, the CEPT-framework of PTT administrations and the European standardisation bodies CEN-CENELEC. In 1983 the Commission installed a Task-force on Information Technologies and Telecommunications , made up of EC *fonctionnaires* (mainly from DG III/Industrial Policy) and industry experts. The aim of the Task-force was to monitor the EC technology programmes and develop a common strategy for the future in cooperation with the Ministers of Industry, PTT administrations and representatives of the telecommunications industry.

The Task Force was installed as an autonomous DG of the Commission for *Telecommunications , Information Industries and Innovation* (DG XIII) in 1986. The activities of the Task Force were supported by the Senior Officials Group on Telecommunications SOG-T, that had been established in 1983 to represent the EC member states and their national operators. This sectoral COREPER played an advisory role with respect to EC telecommunications policy, intermediating between supra-national and national authorities. In its 1984 Action Programme, the Commission set six targets for an integrated European telecommunications policy, that would:

- set medium- and long range goals at EC-level;
- define and implement a research and development programme;
- expand the market for terminal equipment by mutual recognition of standards;
- cooperate closely to create the future telecommunications infrastructure;
- use modern information technologies in underdeveloped regions within the EC;
- open up hitherto protected public procurement contracts (CEC 1984).

The European business community found itself inadequately equipped to cope with two external threats (e.g. ERT 1986; McKendrick 1987). First there was the high technology threat from the US and Japan and their rising global dominance in vital sectors excluding Europe, secondly there was the low-end technology threat from the Newly Industrialising Countries with their low cost base and high degree of flexibility, damaging Europe's industrial interests even further. The reasons for Europe inability to compete with its global rivals were manifold, but they all had to do with the predominantly national outlook of Europe's industry: the markets within the European Community were highly fragmented and R&D was duplicated, the dispersed European industry failed to achieve the sufficient economies of scale

needed to compete at the international level. Despite its superiority in R&D, European industry was slow in bringing its innovations to the market (markets that were still being conceived of as domestic in stead of European or global), and the socio-economic environment in the European Community with its high wages, social benefits, strict working conditions and high tax economies hampered international competition even further. The main goal for the business community became the stimulation of European integration, to be created by an internal market, the convergence of regulations (deregulation at the national and re-regulation at the European level), and a general business environment in which flexibility and economies of scale would be promoted and cross-border industrial activities (e.g. the abolition of internal trade barriers, the promotion of cross-border mergers) facilitated.

In the mid-1980s, the Commission expressed its intention to complete the Internal Market before 1993. The White Paper on the Single Market declared that diverging national rules and standards were hindering the creation of a common European market (CEC 1985). These trade barriers within the Community handicapped Europe's competitiveness *vis-à-vis* Japan and the USA. The Commission introduced a broad package aimed at stimulating competition, harmonising standards, rules, and regulations throughout the Community. Also, telecommunications policy was linked to the new goals set by the Commission in the 1986 Single European Act: to complete the Internal Market, achieve a European Research and Technology Community and strengthen European cohesion. With its Green Paper on Telecommunications , an industry-specific application of the White Paper, it responded to the major complaints of European (and American) business users about big differences between services in terms of technical interfaces, tariffs and regulations within the Community, frustrating network expansion and the demand for new facilities and services (CEC 1987). Within the overall investigation into the costs of trade barriers in Europe by Cecchini *et al.* (1988), the costs of a non-integrated European market for telecommunications services and equipment, caused by a patchwork of varying standards and protected suppliers that limited the size and dynamics of the telecommunications market were estimated to be about 5bn ECU.

The Commission's Green Paper was aimed at liberalising the Community's monopolistic telecommunications market by the following measures:

- the liberalisation of supply and provision of terminal and network equipment;
- the opening up of the services market (with the temporary exception of public voice and basic network operation);
- the separation of the operational and regulatory functions of the public operator (PTT) in order to create sound and transparent market structures;
- ensuring open access conditions to networks and interconnection;
- the stimulation of European standardisation, with the creation of the European Telecommunications Standards Institute ETSI;
- the promotion and creation of pan-European compatible networks and services (ISDN);
- the full application of competition regulation to the sector (i.e. reducing protectionist procurement policies and harmonising tariffs).

The Green Paper did not suggest any provisions with respect to the following market conditions: the regulatory structure to supervise the industry, the ownership structure of the telecommunications administrations (i.e. private or public ownership) and the introduction of competition in the domains of network provision and the supply of reserved services. The only explicit provision with respect to the restructuring of PTT administrations was that a clear separation between its regulatory and operational functions was required. This implied that the PTT administrations were no longer responsible for ensuring universal services, frequency management, tariffing, standardisation, supervision of the industry and so forth. The member states were allowed to make a regulatory distinction between the basic infrastructure and reserved services to ensure public service goals and competitive services. Network provision and voice telephony fell under the member states' jurisdiction to specify exclusive rights to the national operator; the provision of reserved services was subject to the Commission's liberalisation path set for the mid-term.

The Green Paper was intended to encourage the debate on telecommunications deregulation in the Community and to attract comments from a broad spectrum of stakeholders (Council, Parliament, national governments, equipment industry, services industry and the PTTs). Its aim was to break up the nationalistic and fragmented organisation of the European telecommunications market and to foster an integrated market through a controlled deregulation of the domestic markets. However, the core segments of the telecommunications market, network provision and voice telephony, were temporarily excluded from the liberalisation plans in order to ensure the long-term financial viability of the PTT administrations and public service provision (CEC 1987). After wide and intensive consultations of the various stakeholders and policy discussions, the Commission's Green Paper was endorsed by the Council of Ministers one year later in 1988. In a Communication, the Commission set out a programme of action, in which priorities were set and strict deadlines for implementation were proposed: mutual recognition of type approval (before 1988), liberalisation of the terminal equipment market (before 1990) and services (with the exception of voice)(before 1992), and implementation of accompanying measures (i.e. separation of operational and regulatory functions, open network provision and the creation of European Telecommunications Standards Institute)(CEC 1988). The Commission also identified 'politically sensitive' areas where a comprehensive consensus still had to be worked out: the liberalisation of satellite communications, the promotion of pan-European services, the definition of common tariff principles and trade aspects of the Community's telecommunications industry.

The Community's market-driven strategy was a clear compromise between two opposing governance regimes and between two groups of stakeholders: it suggested preserving the public operators' monopoly on infrastructure and basic services provision, while the demands of large business users were met by introducing competition into the markets for enhanced services and terminal equipment. The liberalisation and deregulation measures proposed by the Commission had a direct relevance for the policy process in the member states, because they constrained the

formation and implementation of policy adjustments in national telecommunications. In other words, domestic rulings became more contingent upon the boundaries set by the European Community. and began to develop policies which would use its jurisdiction to seek the adjustments of national monopolies to promote more competitive and open markets. The Commission started to develop policies which would use its jurisdiction to facilitate the modification of national telecommunications monopolies and to liberalise the terminal equipment and services markets and open up public procurement to competition. In this process, key roles were played by the Commission and the European Court of Justice. In 1988 and 1990, the Commission ignored the persistence of article 90 of the Treaty and for the first time the Commission used its powers to implement two directives to push open the markets for terminal equipment and services (Sauter 1995). Due to this 'contested' policy innovation, the member states were required to withdraw all special and exclusive rights on the provision of services and terminal equipment; for a transitional phase they were allowed to retain their exclusive rights for voice telephony and if public network access was transparent and non-discriminatory. The Court of Justice became a prominent actor in the area, when in the 1985 British Telecom case it confirmed that the European competition rules were fully applicable to the telecommunications sector. The adoption of the 1988 Terminal Equipment Directive (88/301/EEC) and the 1990 Services Directive (90/308/EEC) ordered the member states to take all the measures required to ensure that any company was able to supply terminal equipment and telecommunications services (with the exception of voice telephony).

In short, the Commission effectively extended the application of the competition rules and the fundamental freedoms to those telecommunications undertakings granted with exclusive rights. This also implied that any proposal for an economic alliance between public telecommunications operators likely to affect trade in the Community had to be referred to the Commission and became to its Merger Control Regulations. The Commission has tried to bring greater transparency in awarding public contracts and opening up collusive procurement policies in the utilities sectors. Initially telecommunications and other public utilities were exempted from the Community's rules on competitive tendering. In 1990, after the implementation of Directive 90/521/EEC) ending this exclusion, the Commission managed to introduce more competition in the highly protected public procurement market.. The adoption of a Commission's Directive on public contracts by the Council implied that the member states had to establish more transparent bidding procedures before 1993. The Community also promoted coordinating the construction of pan-European and new services: the introduction of digital cellular and paging systems (GSM & ERMES), the digital cordless telephone (DECT), the Integrated Services Digital Network (ISDN), Integrated Broadband Communications Network (IBCN), High Definition Television (HDTV) and Trans-European Information Networks and so on. Another step towards establishing effective competition in the Community-wide telecommunications market was the regulation of the relationships between operators and users to ensure open access to public networks and abolish discriminatory and unfair restrictions on networks access and usage (Higham 1993). The politically

sensitive issue of the division of responsibilities between the Commission and member states in the domain of Open Network Provision ONP, was temporarily resolved in an agreement, stating that regulation was primarily the responsibility of the national regulatory authorities, leaving the Commission with a minimal administrative and basically supportive role in Community policy making. The Commission has also become active in telecommunications pricing by attacking presumed cartel and monopoly price fixing and a speedy introduction of cost-oriented charges and a reduction of intra-community tariffs. The Commission encouraged the member states to implement measures that were aimed at the introduction of price cap formulas and the permission of bulk discounts to large-scale users.

At the time of the official accomplishment of the Single Market in 1992, the openness of European telecommunications to competition was hardly satisfactory. With the exception of the UK, where an effective duopoly had been established, competition in the Community was still restricted to the 'fringes' of the industry. The key voice services market was still excluded from any liberalisation measures and the implementation of the EC directives on mutual recognition, services, equipment and ONP were only partially implemented. Nevertheless some major achievements had been made by the Commission, the Parliament and the Court of Justice, the driving forces behind the integration of markets and orchestration of new EC-wide structures, turning Brussels into the *'new capital of European telecommunications '* (Bessières 1989).

However, the process of economic integration came to a standstill after 1992, when the member states, through the Council of Ministers, dampened the ambitions of the Commission in its preparations for establishing a fully integrated European telecommunications market. The fear of furthering economic and political union and the subsequent centralisation of Community decision making, were the main factors behind a Community-wide adoption of the subsidiarity principle, implying a de facto increase in legislative powers for the member states at the expense of the Commission. While no mention of subsidiarity was made in the 1992 draft version on the review and future prospects of EC telecommunications , the Commission's final document included one paragraph on the decentralisation of policy making from the EC to the national levels. The Commission had to accept a delay in the introduction of competition in voice telephony, and water down its ambition for an open and transparent public framework and compromise on the level of regulation by the creation of a high-level committee of national regulatory officials and Commission representatives.

The European Community has become increasingly divided over the desired telecommunications strategy to be followed and the time frame involved in implementing it. On the one hand, there are the 'liberalisers' (e.g. the United Kingdom, and the Scandinavian countries), in favour of speeding up the process of market integration. On the other hand, there are 'protectionist' countries (e.g. France, Spain, Italy, Greece) who argue that state intervention and a core public monopoly alongside liberalised 'fringe' markets, are temporarily justified. A straightforward

liberalisation strategy might result in a fragmented telecommunications infrastructure, which would imply that expensive interfaces to interconnect these subnetworks, are required. Another drawback is that the principles of redistribution and universal service, which assume some degree of government control of telecommunications system, will be lost. The 'controlled deregulation' path followed on the European continent may have the disadvantage that, by giving priority to the universal service provision, it may be unable to meet differentiated business demands. Compared to the saturating market for residential users, the market for customised and enhanced services is very promising and profitable. The protected public network runs the risk of being bypassed by alternative private network operators or the entry of resellers targeting the profitable segments of the public monopoly. Another disadvantage is that competition may prove a better environment than monopoly for stimulating innovation. The 'protectionist' countries have suggested a step-by-step liberalisation process and a gradual adjustment to the new market conditions. One reason for implementing incremental change, is the concern national governments' have for preserving employment, which is relatively high in the telecommunications industry. The position of Germany in all this has been somewhat unclear. Traditionally, the German government was strongly in favour of economic integration and the effective abolition of trade barriers. In the telecommunications domain, however, the position of the Bundespost DBP was leaning towards the protectiontist stance. Especially after German unification, the German Government and the DBP gave clear priority to modernising the infrastructure in the *new Länder* over the restructuring of its domestic telecommunications and the reorganisation of the Bundespost, the public operator.

These intra-EC differences have always existed, but after the acceptance of the Maastricht Treaty, it seems more likely than ever that the European telecommunications sector will develop at two different speeds. According to the obligations set out in the Services Directive, a review was scheduled for 1992. Before publishing the Review, however, the Commission, like before, extensively consulted the industry's stakeholders. In the 1993 Review the Commission identified several problem areas in the establishment of a more integrated European market (CEC 1992, 1993): the need for tariff rebalancing (intra-community tariffs were still high in relation to costs, especially cross-border calls); the high charges and poor service provision of high speed leased lines, and the growing diversion of traffic between member states and between the Community and third countries (e.g. 'call-me-back') and fierce competition from low tariff operators. Furthermore, a more precise interpretation of closed user group networks, necessary for the liberalisation of private business communications, was required. The Commission proposed four policy alternatives regarding future telecommunications liberalisation (CEC 1992):

- freezing the liberalisation process and maintaining the status quo;
- introducing extensive administrative regulation of both tariffs and investments;
- liberalising all voice telephony: both national, EC-wide and international calls;

- an intermediate option of opening voice telephony between member states to competition.

After the consultative process, the Council decided that the exclusive rights to public voice telephony would be removed before 1998. The Commission found itself in a difficult situation, balancing between liberalisation and harmonisation. On the one hand a full implementation of the competition rules and the freedom to provide services was required, while on the other hand the interoperability between technically diverging national networks needed to be ensured. The Commission also had to safeguard the financial viability of PTT organisations. Originally, the Commission proposed an immediate liberalisation of the network infrastructure and services markets by 1996. However, this proposal was perceived by the protectionist countries, France and its allies, as too radical. Then the option of a two-tiered liberalisation was given full attention: first the deregulation of infrastructure provision (i.e. cable networks and alternative 'public' networks) before 1996 then two years later, in 1998, the remainder of the market, i.e. fixed voice telephony would be opened to competition (CEC 1994). Finally, the Member States agreed upon full market liberalisation by 1998. Spain, Portugal, Ireland, Greece and Luxembourg were granted a five year delay maximum to adjust to the new conditions, because of lagging economic and infrastructural development.

The Maastricht Treaty on Political Union (1992-93) promoted open and competitive markets while at the same time ensuring interoperability and access to public networks and requiring the construction of Trans-European (information) Networks. A High Level Group on Information Society, in which the captains of European industry were represented (Siemens, Philips, Olivetti etc.), was established in 1993 to draw up a plan for the creation of a Euro-electronic highway. The Task-force, headed by Commissioner Bangemann (DG III), investigated the areas of technological applications and their market possibilities, and the regulatory and political aspects of multimedia development (High-Level Group 1994). However, telecommunications and cable TV operators, the driving forces behind multi-media development, were not represented. According to the influential Bangemann report, there is a wide variety in the availability, functionality and prices of digital infrastructure and services across the EU: for instance, cable penetration varies between more than 90 per cent in Belgium and the Netherlands to 1-2 per cent in Greece, and the prices of services differ enormously between the UK and France on the one hand and Italy and Greece on the other (High Level Group on the Information Society 1994). European business users are not only dissatisfied by this divergence within the European Community, but also by the huge differences between Europe and the USA. An expensive and sub-optimal EU communications network puts EC firms at a disadvantage. For instance, the European Roundtable of Industrialists ERT (1994: 5/6) complained that: *"Europe today is a patchwork of incompatible communications networks marked by high costs, low quality of services, and very limited interoperability between systems. European communications cost are up to ten times higher than in the US and present a major obstacle to the introduction of new applications. National monopolies still persist in most European countries,*

restricting innovation and competition, whereas deregulation has brought about a dramatic development of the markets in the US and Britain. The European Union has launched a process of liberalisation, but it is too slow, and in many countries is being applied inadequately or not at all."

The European Commission and the related Bangemann group were susceptible to the complaints raised by the European busiess community. The High Level Group on the Information Society (1994) asked for a full liberalisation of service and infrastructure provision in Europe with clear deadlines and timetables, and the establishment of a single European regulatory authority in charge of the implementation and compliance of telecommunications policy. To some extent, a new European regulatory framework is already evolving as the consequence of the adoption of the ONP, Services and Terminal Equipment Directives (Sun & Pelkmans 1994; Scott 1994; Sauter 1995). It basically includes a two-level policy network where both representatives of the National Regulatory Authorities (NRA) and the Commission are involved in regulatory policy making at various stages in the process. General policy formation may be done at the EU level, the detailed implementation of telecommunications policy may be left to the member states and their NRAs, and monitoring and peer review may be to carried out jointly by a network of NRAs, with the Commission being responsible for overall policy enforcement and compliance and acting as arbiter of last resort. The ONP-Committee, established in 1984, is an example of this new European regulatory framework in the making.

3.7 *Summary and Concluding Remarks*

In Western Europe most countries used to have a common institutional framework in which the telecommunications facilities (terminal equipment, voice telephony and other services) were the exclusive responsibility of the state-controlled PTT administration. PTT's traditional business view was essentially that of an engineer with a strong emphasis on orderliness, system continuity and centrally planned end-to-end services, that met economic infrastructural needs and the social function of redistribution and universal service. The public telecommunications monopoly was broadly defined. PTT offered standardised products and services to households and showed a lack of flexibility in meeting business users' demand (e.g. the uniform tariff structure was in favour of residential consumers and against business users). The telecommunications environment has for a long time been stable and well-organised: technology was simple, demand patterns were clear and legislation was perceived as adequately organised at basically the national level. However, the established government-sanctioned monopoly, that included exclusive control over the infrastructure, service provision and equipment supply and a supportive *iron triangle* of PTT, its monopsonistic equipment suppliers, and the domestic government, was effectively challenged by technological, economic, international, and institutional developments.

In this chapter we have discussed four structural forces, that have reduced the possibilities of nation states to control their telecommunications sector in the

traditional way: technological (r)evolution, the globalisation of communication markets, international deregulation, and European integration (see table 3.2). The governance regime of the European telecommunications industry seems to move from a quasi-hierarchically integrated polity, based on a state-controlled monopoly and the obligational networks of the PTT and the domestic equipment industry, to a new industrial structure, that seems to be less exclusive and protectionist and more favourable to new entry, competition and innovation. Nowadays, the telecommunications industry seems to be characterised by the development of a whole range of new products, services and networks, the evolution towards open access to the public infrastructure and interconnecting networks, internationalisation, fast-growing demand for specialised business services and increased competition. The formerly protected telephone administrations are changing from production-oriented companies, relying upon engineering and government-specified public service requirements, into service-oriented companies, more flexible and responsive to their customers and market demand. Furthermore, one can see a geographical expansion of the business activities of the telecommunication companies, leading computing firms and the services industry by horizontal and vertical integration and joint ventures towards integrated multi-media conglomerates and/or interfirm networks operating on a world wide scale and comprising participants from Japan, Europe and the USA.

As a consequence of technological innovations and changing market conditions, new players like the computing industry, services industry, new equipment suppliers and business users, have entered the traditional telecommunications domain. The emergence of international deregulation, triggered by the American, British and Japanese strategies, together with the process of European integration, were other factors behind the growing need for a redefinition of the traditional institutional framework of European telecommunications. The traditional monopoly/cartel regime is now been seen as inadequate with the current technological, economic and international trends and pressures; contemporary telecommunications has become too varied, complex and important to be managed domestically by one common carrier and internationally by a cartel of PTTs. Within public policy making a conflict has emerged between the public service function of the PTTs, providing equal access for everyone to the telecommunications service and, a more commercial orientation emphasising flexibility and responsiveness to the demands of specific (business) user groups. These large users have increasingly gained control over the 'neighbouring' network segments and have in that sense 'privatised' parts of the public network: switching has moved from the public exchange to the private telephone switchboard and transmission increasingly moves from the public networks to private circuits.

A new balance has to be found between the promotion of new and alternative networks and the competitive supply of advanced services for the small 'big business' communities and a state-controlled or regulated provision of a public infrastructure and basic communication services, universally available and accessible for everyone. In implementing institutional change, governments have to match the political and economic demands of three constituencies:

- the domestic preferences of established stakeholders: e.g. a 'sheltered' corporate restructuring and concerns about losing market shares, universal service provision, jobs, etc.);
- the international ambitions and trade interests of its home players: e.g. the revitalised PTT negotiating access to foreign markets and seeking strategic partners, promoting the competitive position of equipment manufacturers and the information-intensive services industries vis-à-vis foreign contenders;
- and the claims of new (foreign) entrants (supported by large users representatives), that competition in the home market will stimulate efficiency, innovation, customer responsiveness and the availability of cheap and high-quality services.

Table 3.2: Structural Forces Challenging the National Public Telecommunications Regime

Technological (R)evolution innovations making end to network/frequency scarcity: alternative transmission possibilities, the merging of technologies and adding 'intelligent' functionality to network question the public telecommunications monopoly and erode existing industrial market and policy boundaries;
Globalisation and Differentiation of Communication Markets: shifting market supply and demand patterns: increasing growth and differentiation of user demand for advanced and low-cost services, and the emergence of competition, characterised by new entry, concentration and the formation of international strategic alliances at the supply side;
International Deregulation: the early implementation of deregulation measures in the USA (from the early 1950s onwards), followed by the structural reforms in the UK and Japan, and shifts in international frameworks towards free trade and competition;
European integration the creation of the 1992 Internal Market (cross-national deregulation) and the subsequent gradual shifting of regulation to the European level of decision making, curtailing the development of sovereign national policies;

4

The Liberalisation, Privatisation and Regulatory Reform of Telecommunications in the UK: In Care of the Market ?

4.1 *Introduction*

The industrial adjustment strategy adhered to by UK governments over the years has been characterised by a market-led or company-led pursuit of efficient markets and new technologies, and achieved by promoting free enterprise and withdrawing the state from the national economy (Zysman 1983,1995; Katzenstein 1978,1985). This strategy has sustained the openness of the British economy and forced domestic companies to compete in world markets. The typical British market-oriented or liberal policy response was taken to its extreme in the 1980s and 1990s, when the 'Thatcherite' Conservatives implemented carried out their 'Big bang' programmes, aimed at a rapid removal of remaining barriers to free enterprise. Before 1979, the character of industrial/economic policy in the UK was less profound, alternating between market-led and interventionist adjustment strategies, as promoted by 'modest' Conservative and Labour governments. The study of the restructuring of telecommunications in the UK, as carried out in the 1980s and early 1990s, is a highly interesting one, because the country has played *'the role of policy laboratory for the world'* (Garnham 1990: 7). The UK programme, characterised by radical privatisation, far-reaching liberalisation and concomitant regulatory reform, became exemplary in Europe both for inspiration and deterrence. Since 1981, competition has been introduced in nearly all segments of the UK telecommunications market, including equipment, enhanced services, mobile communications, voice telephony and basic networks. The public operator British Telecom was separated from the Post Office and eventually privatised in the mid-1980s, and the independent OFTEL-body was established, taking responsibility for monitoring and regulating the liberalised telecommunications market. Britain's radical strategy was clearly ahead of the more gradual plans of the European Commission, as laid down in the 1987 Green Paper, to open the Community's telecommunications market.

In the late 1970s, when demand of business customers for reliable, low-cost and high-capacity data-services became manifest, the public telecommunications operator Post Office (PO) was poorly equipped in terms of its strategic and organisational resources to respond effectively. At that time the Post Office was a rigid bureaucracy with a relatively poor performance, hindered by tight financial constraints set by the Treasury. It ran a relatively inefficient and outdated network and price setting was

still based upon the traditional cross-subsidisation model. The combination of four successive Tory governments, constantly arguing in favour of free trade and popular capitalism against high levels of public expenditure, taxation and government intervention, and the economic and political weight of the financial and business services industry, located in the City of London has proved crucial the reorganisation of UK telecommunications. Elaborating on the proposals of the Labour Government (1974-79) for the reorganisation of the PO, the Thatcher Government decided to separate telecommunications from the postal services, to give the newly established British Telecom (BT) a legal corporate status and the sell of a majority of its shares in 1984. The markets for terminal equipment and enhanced services were fully liberalised. With regards to voice telephony, infrastructure provision, and analogue mobile services, the public monopoly was replaced by an administered market system. In the case of voice telephony and network provision, a market duopoly was established, whereby BT competed with the much smaller Mercury/Cable & Wireless. In the cellular market another duopoly was established, in which BT's subsidiary Cellnet competed with the new entrant Vodafone. A newly created administrative agency OFTEL, acting autonomously from the central government and British Telecom, was put in charge of supervising the telecommunications industry. After 1991 when the duopoly path was abandoned, BT, Mercury/C&W and Vodafone faced increasing competition from a variety of new entrants, like newly licensed operators (e.g. British Rail, utilities, cable television companies, new cellular service providers, resellers of leased lines, foreign carriers etc.).

The dominant coalition, that played a decisive role in changing the institutional structure of UK telecommunications, was made up of the Conservative government and the large business users, to some extent supported by the privatised administrations British Telecom and Cable & Wireless. These actors argued that the (gradual) deregulation of domestic telecommunications would promote a favourable business environment, herewith enhancing efficiency, choice, market responsiveness and technological innovation, all benefiting both large and residential customers. Such a favourable business environment would have a positive effect on international trade in services and strengthen the position of the UK in the world by attracting international traffic and international businesses critically dependent upon adequate, flexible and efficient telecommunications facilities. As a consequence, all markets were opened up to competition, and the shares of the national public operator British Telecom were sold at the stock market between 1984-93. The preparation of the privatisation and the actual flotation triggered a multitude of business activities in the City of London: not only for the financial services industry, but also for lawyers, pr/advertising and consultancy firms. The Thatcherite privatisation strategy received further support from BT's management, employees and the wider public, who were also actively involved in the purchase of (underpriced) state assets.

Before discussing the traditional structure and changes in the British telecommunications industry, we will examine those political and economic contingencies at the national level that might have had an impact on the policy process. The sector's wider political and economic setting and the structural adjustment policies followed by the UK government between 1980-1994, will be

introduced in sections 4.2. and 4.3., respectively. Next, the focus will shift to the industry level, as we will discuss the monopolisation and de-monopolisation tendencies in domestic telecommunications between 1878 and 1979, beginning with the establishment of a *de facto* public monopoly for the Post Office as the organisational form governing telecommunications in the United Kingdom (section 4.4). After that we will discuss the trend towards de-monopolising British telecommunications, that led eventually to restricting the public monopoly, introducing managed competition in the domestic market, and reorganising and privatising the Post Office/British Telecom (section 4.5). The processes of liberalisation, privatisation and regulatory reform are treated in more detail in the sections 4.6, 4.7. and 4.8, respectively. Finally, we will close with a brief summary and some concluding remarks on the major shifts in UK telecommunications policy (section 4.9).

4.2 *The Wider Political-Economic Setting of UK Telecommunications*

Before discussing the established organisation and structural changes in the British telecommunications polity, we will examine the wider political and economic setting. To describe this institutional environment we will briefly touch upon a few national variables that are characteristic for the relationship between government and the business community in the UK: the production profile, the organisation of government, the system of interest intermediation, approaches to economic policy, and international dependency of the British economy.

Production Profile

The British economy has traditionally shown an international outlook: a focus on overseas (colonial and European) markets, a globally oriented services sector (banking, insurance, trading, and media), large overseas investments, and large domestic foreign investments. The City of London is a leading international centre, housing a large share of the world economy's commercial, banking and financial operations and the most important financial institutions and providers of business services (e.g. accountancy, marketing, consultancy etc.). Compared to the dominant role the UK occupies in the services industries (and in chemicals and pharmaceuticals), manufacturing is characterised by a poor overall economic performance, contraction, and relative decline. Over the last twenty years, the UK has increasingly fallen behind its major foreign competitors. After its technological and industrial leadership from the pioneering days of industrialisation until the early 20th century, Britain's supremacy was eroded by fierce international competition, eventually giving way to massive de-industrialisation and radical restructuring (e.g. British Leyland and British Steel). Britain's industrial and technological base proved rather one-sided, lacking in innovative flexibility and suffering from short-run profit maximisation and asset trading (Walker 1993). The conservative strategies followed by firms and governments turned out to be largely ineffective. Compared to its major competitors who are all more or less specialised in the up-market of highly value-

added products, British manufacturing found itself in the lower end of the market with many low-unit value products and a lack of sophisticated goods.

In the 1970s the UK found itself in a crisis characterised by major economic inefficiencies, high levels of inflation and unemployment, rising public expenditures and a large budget deficit (Gamble 1994). Both Labour and Conservative governments had been unable to modernise 'smokestack' industries and promote the interests of promising sectors in an orchestrated way. The industrial policies followed by the various governments before 1979 gave a clear priority to ailing 'sunset' industries rather than 'sunrise' industries and to the international interests of the City over domestic manufacturing. The government has addressed the manufacturing sector rather selectively, most of the attention was given to the defence-based and defence-related industries (i.e. aviation, aerospace and computing). Given Britain's strong commitment to domestic security and with defence accounting for more than 50 % of government R&D expenditures, the leading defence electronics firms, British Aerospace, GEC and Plessey have strongly benefited from the government's investment plans (Walker 1993). These protective measures, however, have also shielded these firms from international competition. One reason for the erosion of the manufacturing base in the UK could be found in the strategy of high exchange rates and an overvalued currency followed by the post-war governments. This policy gave clear priority to the world-wide interests of the financial sector to secure London as an international centre. The consequence for domestic manufacturing was that it was saddled with high export prices while competitive imports and foreign investments in the already suffering manufacturing industries were encouraged (notably by Japanese companies).

Organisation of the State

The British political system represents a majoritarian model of democracy, characterised by a concentration of executive power (one party and bare majority cabinets), fusion of power and cabinet dominance, a one-dimensional two party system, and, as a rule, a unitary and centralised one-party government (Lijphart 1984). This system, based on the principle of 'winner takes all', tends to produce a process of policy making that offers little scope for consensus-seeking and coalition cabinets. The most powerful body in government is the Cabinet, which is usually composed of the members of the party with an absolute majority in the House of Commons. 'Bare-majority' cabinets coming into office are able to implement the policies they advocate rather easily, without consulting the large minority in Parliament. As a consequence, most cabinets have used the state apparatus to impose their party manifestos on British society. The British political system is characterised by a party duopoly whereby the winning party has a virtual monopoly on the powers of government (Willis and Grant 1987).

Until 1979, political decision making tended to be incremental, with a slightly shifting emphasis every time political power changed hands between the parties (Jordan & Richardson 1982). Often, policies implemented by the previous government were 'corrected' by the new one. After 1979, the British policy style

changed from emphasising negotiation and accommodation, as promoted by the Labour party and the moderate sections within the Conservative party, to a deliberately confrontational style of politics, advocated by the radical Tories under the leadership of Mrs. Thatcher. According to the Tory Government that came into office in 1979 the cause of the economic recession was clear-cut and simple: state intervention and bureaucracy had gone too far and trade unions had far too much power in British society. A large public sector with a considerable number of nationalised enterprises (10.5 per cent of GDP and 8.1 per cent of total workforce) and an expanding welfare state, had put a strong fiscal burden on the Treasury. From 1979 onwards, the radical Tories, convinced of the need for structural reform in public expenditure, effectively reduced the degree of state intervention in the national economy by restoring the market mechanism (liberalisation), cutting back government subsidies to industry and the Keynesian welfare state., and implementing an impressive privatisation programme.

The UK government traditionally has followed a liberal strategy aimed at stimulating market forces and free trade and delegating the formation and implementation of economic policy to a large extent to the responsibility of powerful private actors. Compared to the state societies on the European Continent, Dyson (1980: viii) referred to Britain as a state-less society, lacking *'a historical and legal tradition of the state as an institution that 'acts' in the name of public authority.'* Given the rather weak position of the state *vis-à-vis* society, the UK government is entrusted with a powerful executive: a strong cabinet supported by an insulated bureaucracy relatively invulnerable to direct pressure from Parliament and organised interest groups. In general, the British government has treated the management of the economy not only *as a business* to be run by supportive macro-economic and trade policies, but also as *the domain of businessmen* (Grant 1991). The British system of government-business relations has a 'sponsorship' tradition, in which particular departments within the public administration assume exclusive responsibility for specific policy domains: e.g. the Department of Trade and Industry DTI actively promotes the interests of manufacturing, the extractive industries, communications and finance/insurance. The UK has been qualified as a 'company state', exhibiting an arm's length relationship between government and industry (Willis and Grant (1987). Britain has a tradition of state-approved self-governance by the industry concerned, relying upon privately enforced negotiations and voluntary compliance to regulate the industry, and supported by gentlemen's agreements between industry and government. Compared to the adversarial, bureaucratic and open character of US regulation, UK-style regulation is more flexible, informal, cooperative and closed (Vogel 1986; Baggott 1989). From the early 1980s onwards, however, the tradition of self-regulation in the UK underwent some changes as a result of the implementation of both deregulation and re-regulation measures. The Conservative Government has liberalised various sectors (financial services, broadcasting) and reduced several controls and inhibitions in the fields of labour markets, industrial relations, corporate tax rulings and so on. Regarding public utilities (like telecommunications, energy, water and energy), the government has replaced far-reaching state intervention by a more detailed and formalistic US-like regulation through the creation of several

quasi-administrative agencies that regulate and supervise the de-nationalised industries (Cave 1991). These regulatory agencies are listed as non-ministerial government departments, and staffed by civil servants. Originally, they depended on annual contributions from their sponsoring department and the Treasury, supplemented with revenues, generated by the issuing of licenses. Today, however most of the regulatory agencies are fully self-supporting (Hogwood 1992; Foster 1992; NAO 1993).

System of Interest Intermediation

The system of interest intermediation in Britain could be typified as pluralistic, whereby the government actively seeks to mobilise the support of powerful private groups. In practice this has often led to direct negotiations between government departments and large firms to bring their corporate behaviour in line with public policy objectives (Grant 1984). The use of intermediary channels of the interest associations of organised business and labour has usually had a lower priority in the formation of Britain's industrial policy. The Thatcher Government no longer sought quasi-corporatist solutions with the traditional social partners, notably the TUC and the CBI, and deliberately by-passed the established industrial relations system by encouraging company-level negotiations and giving more influence to the less consensualist Institute of Directors. Britain's workforce is relatively well organised, but in a highly dispersed and decentralised way. At the end of the 1970s, about 53 per cent of the active workforce was unionised; under Mrs. Thatcher union membership fell below 40 per cent (Crouch 1990). The workforce is organised in more than 100 trade unions, loosely integrated in the Trade Union Congress TUC with viewpoints varying from radical-socialism to more moderate views regarding industrial relations. The TUC is a confederation of trade unions (many of them still craft-based) with only limited bureaucratic means and sanctions to force its constituents to comply. The trade unions have a special and direct link with the Labour party, contributing ideologically and financially to the party's activities. The Conservative governments of the 1980s regarded the high level of trade unions militancy and the union's relative power in sectors like coal, railways and other public sector-industries (with unionisation rates of more than 90 per cent (Parris *et al.* 1985) as counterproductive to the economy and effectively cut back union influence in socio-economic policies. Business is organised along the same lines as the workforce, in that it is both highly organised and decentralised. The Confederation of British Industry (CBI) is a relatively weak confederation of loosely integrated semi-independent units and heavily divided between financial and industrial capital. Unlike the close relationship between the Labour party and the TUC, the relationship between the Conservative party and the CBI is more distant. The Conservative party has closer links to the financial sector than with the manufacturing industries.

Unlike France and Germany, Britain does not have a tradition with regards to the transfer of money flows to critical sectors through deficit spending by an active state and the allocation of large credits by national investment/industrial banks to sponsor domestic industries (Zysman 1983). The merchant banking system in Britain has prevented the evolution of strong alliances between state-controlled or private

investment banks and manufacturing. The collaboration between state, the financial community and industry in France and Germany, working through personal contacts, interlocking directorates, large shareholdings and close financial supervision, is absent in Britain. The British government has pursued a different strategy by transferring financial resources for key industries through the national budget and by controlling public expenditure. In stead of utilising the banking community to accomplish economic policy objectives, the government gave clear priority to the interests of the large clearing banks, unit trust companies, pension funds and insurance companies, and the London Stock Exchange as the major international financial hub (M. Hall 1987). The 'City-nexus', which includes the commercial banks, the Treasury, and the Bank of England has traditionally fostered free trade, stable exchange rates and balance of payments, without taking any explicit responsibility for the financing of domestic industrial developments or helping prevent the contraction and the loss of competitiveness of domestic manufacturing (Capie and Collins 1992). The imperatives of the London Stock Market favour a rather one-sided orientation towards the profitability, share prices and annual dividends of companies over a clear commitment to corporate planning and long-term industrial restructuring. The involvement of the British banking community in industrial management is partial and temporary: institutional investors are primarily interested in short term portfolio management rather than the future viability of businesses (Grant 1991). Consequently, longer term investments in R&D, equipment and human capital have suffered. Because of this *short-termism*, corporate management had to rely heavily on retained profits and short-term loans provided through the capital market (stocks and bonds).

Economic Culture and Ideology

The economic approach of the UK combines a core 'liberal' doctrine, i.e. leaving major decisions to markets and firms, with a relatively centralised political system. There is a remarkable difference over time, however, between the post-war consensus among alternating Labour and Conservative governments and organised business and labour, and the strongly business-oriented and confrontational Tory governments from 1979 onwards. The *Thatcherite* creed was strongly inspired by a 'get the government off our backs'-philosophy', a desire to break trade union powers and a firm belief in the overall functioning of markets as efficient means to achieve growth and innovation. In addition to the free enterprise principles of Thatcherism, i.e. the decentralisation of socio-economic activities and non-intervention, the government showed decisive leadership in some particular areas. To provide the goods that the market could not provide (defence, security, law enforcement and price stability) and to support and police the 'free economy', a 'strong state' was needed (Gamble 1994). The policies of the Thatcher & Major Governments have been directed towards privatising state equity, deregulating labour markets and financial services, furthering competition and reducing public spending and corporate taxation. The British approach towards competition policy has been characterised by a pragmatic spirit and an *ad hoc* application of the public powers of the Monopolies and Mergers Commission (MMC) and the Office of Fair Trading (OFT) (Sharpe 1985). Obviously,

competition policy was given more priority under the Conservative governments than under Labour. The four Thatcher governments (1979-91) in particular have set forth clear and new objectives, such as the encouragement of new entry and fair play conditions in formerly state-owned utilities, the introduction of price-caps and asymmetric regulation, and the tightening of merger controls. Another economic goal of the Conservative governments of the 1980s has been the promotion of free trade. The UK has been more inclined than for example Germany or France in its acceptance of inward investment of subsidiaries of American and Japanese firms.

Traditionally, British industrial culture has been strongly divided between business and labour, and business between manufacturing and commerce. The division between manufacturing and the services sector (finance, trade and commerce) is deep: it resembles not only the divergence between the industrial *North* (the Midlands, the Clyde Bank) and the financial and trade centres of the *South* (i.e. the City of London), but it also exhibits major differences in terms of attitudes towards economic modernisation (Wiener 1981). British manufacturing has exhibited a pattern of business behaviour, favouring stability and giving little attention to technological innovation, economic growth and international competition. Its counterpart, the services industry, strongly promoted market innovation, high growth strategies and international free trade. While the former was confronted with a lack of international competitiveness (i.e. outmoded work practices, overmanning, industrial conflicts, and foreign direct investment), the latter has expanded very successfully: the City of London strengthened its position as Europe's centre in finance, trade and commerce. Organised labour in Britain shared the manufacturers' conservative attitude towards industrial modernisation and has maintained a rather defensive or even hostile attitude towards technological and industrial change. Another major rift in British economic ideology lies in the definition of the state's role in society. A strong difference exists between the interventionist policies of the Labour governments, emphasising nationalisation and rationalisation of firms and industries, and the economic policies pursued by Conservative governments, emphasising a mixture of free trade, monetarism and curtailment of state intervention in society.

Positioning in the International Political-economic System

Britain owes its position in the international division of labour to the *first mover advantage* of being the first nation to industrialise its production and internationalise its trade in the 18th and 19th century. After World War II, Britannia no longer ruled the world and the post-war governments had to lower what ambitions they had of dominating international trade and investment patterns. The Commonwealth had started to disintegrate, the US and the USSR were the new policemen of the world and the US, Japan and Germany had become the world's leading economic powers. Britain had to find a new role for itself in the international political economy, striving to combine the objective of securing the nation's autonomy with the aim of fostering collaboration with the US and Western Europe. After joining the European Community in 1973, Britain's relationship with the European Community has reflected the dilemma of promoting an Internal Market based on free trade principles, without sacrificing the nation's sovereignty in social-economic matters, foreign

affairs and security/defence policies. Fed up by the excess of the Common Agricultural Policy, administrative 'red tape' and high bureaucracy compliance costs, there is the persistent Euro-hostility of former Prime Minister Thatcher and other *Euro-rebels*, who have strong doubts about the extension of the Internal Market programme to include economic, monetary and even political union. One of these Eurosceptics, Bill Cash MP (1991), typified the continuing process of European integration as *'knocking twelve European nations into one super-Euro state (p.4)'* that would generate *a 'sclerotic dirigiste EC based on a centralised over-powerful Brussels bureaucracy (p.2)'*, dominated by the Germans and the French. Leaving the European Community, however, is not a real option, since this would imply an effective loss of UK authority in the world. Opposing any proposals to transfer sovereignty to supranational authorities, the UK government argues in favour of extending the free trade area to include Central and Eastern European countries ('widening instead of deepening the Community') (Bulmer *et al.* 1992). The British government's economic policies, however, hardly arouse the wrath of the European Commission (with the exception of social-economic and labour policies) and its industrial and trade strategy is more in line with the Treaty of Rome and the Internal Market Programme than the policies embarked upon by most of its European partners (e.g. France, Italy and Spain). Actually, Britain has one of the best records of implementing EC directives and regulations (Bulmer *et al.* 1992; Greenwood and Jordan 1993). Furthermore, the UK economy is relatively open and welcomes exports, and foreign investments from both European and non-European multinational firms.

In addition to European collaboration, the UK maintained strong trade links with its 'natural' ally the US as well as a strong presence in the Pacific Basin (Hong Kong, Australia). Britain's historical background as a former imperial power and its Commonwealth has played and still plays a decisive role in the formation and implementation of its macro-economic and trade policies. Although less important than before, the UK remains the pivot in a network of international economic relations, manifesting itself through vast monetary and military commitments in its overseas colonies, the pound sterling as an important world currency, a greatly internationalised services sector and the City of London as a global banking centre. Furthermore, the Conservative governments of the 1980s and 1990s strongly advocated the notion of establishing an open international trading environment ('a global playing field'), that would strengthen the international competitiveness of British firms. To further the integration of Britain into the world economy, the UK governments gave full support to the implementation of the Single Market programme and to a quick settlement of the free trade negotiations in the GATT/WTO framework.

4.3 *The Politics of Economic Adjustment in the UK (1981 - 1994)*

After World War II economic policies in Britain were dominated by two issues: the widely supported objective of achieving full employment through Keynesian macro-economic policies and a pre-occupation with Britain's relative economic decline. It

was only with the coming into office of the Thatcher-government in 1979, that public policy clearly changed from tri-partite settlements to explicit *laissez-faire*, aimed at creating a more favourable business environment and giving priority to economic over social policy objectives. The Labour government (1945-51) developed and implemented an ambitious interventionist programme of nationalisation of *the commanding heights of the economy*: the Bank of England, railways, airways, utilities, National Health Service, coal and steel and Cable & Wireless (the overseas telecommunications operator). Under Labour rule the welfare state was expanded to safeguard adequate levels of housing, health care, education and social security for all members of society. The Conservative government (1951-1964) reversed Labour's decisions dealing with the nationalisation of the iron and steel sectors and privatised them, but it also elaborated Labour's full employment programme and expanding the welfare state through Keynesian demand management. In 1962, the National Economic Development Council NEDC was established as a tri-partite forum, chaired by the Treasury, for consultation between government, business and labour on longer-term economic and industrial planning with the purpose of achieving a more balanced and rapid growth. The NEDC was supported by 21 Economic Development Committees EDCs: consultative bodies set up at the industry level exchanging information between government, business and labour. The NEDC-structure, however, was badly integrated within the established policy structures and lacked clear responsibilities: it was more of a consultative forum than an agent actively involved in the formation and implementation of economic policies. The NEDC turned out to be an institutional failure, lacking support from the Treasury. The latter was more interested in short-term macro-economic issues (e.g. inflation, balance of payments, public expenditure), than in active technology and industrial policy making, and longer term indicative industrial planning.

The Labour government (1964-70) developed a more active industrial policy, (re)-nationalising British Steel, and restructuring British industry by promoting mergers among domestic companies ('picking winners') and developing technology policies ('the white heat of the new technological revolution'). In 1966, the Industrial Reconstruction Corporation (IRC) was established to rationalise certain industries: as a result of IRC's intervention British Leyland and ICL Computers were created as national champions. The importance of industrial policies, relatively independent from macro-economic policy and Treasury influence, was only recognised in the mid-sixties, when at Cabinet-level a new Department of Economic Affairs and a Ministry of Technology were established. The first was responsible for national economic planning for the long-run and the second in charge of R&D-policy and promoting high-tech industries. The Labour government attempted to develop balanced industrial policies that were both directed towards encouraging new enterprises, advanced technologies and promising industries, and towards reversing economic decline by rationalisation of size and production, organisational restructuring and revitalisation of management and equipment. This effort, however, proved ineffective as policies, willingly or unwillingly, tended to favour sunset over sunrise industries.

At first, the Conservative Heath Government (1970-74) made a strong effort to follow a free market and monetarist approach and intensify competitiveness by putting forward measures like tax cuts, trade union restraint and the reform of the social services. It also attempted to reduce state intervention in industrial activities by abolishing the Ministry of Technology and the IRC. This radical economic programme triggered a period of social and economic unrest, that was even reinforced by the world-wide consequences of the Bretton-Woods aftermath. When the Heath government realised the unfeasibility of what could be regarded as a first attempt of what was later called Thatcherism, the radical pro-market programme was abandoned and a U-turn made away from market principles to state intervention and compulsory prices and wages control. When British manufacturing was hit hard by international competition and economic recession, industrial policy primarily concerned itself with keeping up employment in declining sectors and the nationalised industries through heavy subsidisation and reorganisation schemes, rather than stimulating technological innovation. The state holding National Enterprise Board NEB for instance, established in 1973 to promote innovative and prosperous manufacturers by providing investment capital and taking substantial shareholdings, ended up in charge of reorganising the declining industries and preserving ailing firms from bankruptcy.

The Labour government (1974-79) tried a mixture of Keynesian macro-economic management, indicative planning and tri-partite arrangements. It continued with the Keynesian policies of voluntary controls on the rate of growth of wages and prices. The withdrawal of support from the TUC for a centralised income policy, together with a revaluation of the pound sterling, led to rapidly rising labour costs and a substantial deterioration of Britain's international competitive position. The Labour Government extended the NEDC-framework of industrial reorganisation through the creation of Sectoral Working Parties SWPs in 39 industries, in addition to the already established 21 EDCs. The interventionist measures taken by the Labour Government proved inadequate to cope with the economic recession that had emerged in the mid-1970s. In 1976 the country was forced to accept loans and advice from the IMF. The rising levels of unemployment and inflation, a government powerless to combat industrial unrest and a disruption of the provision of essential services, eventually led to the downfall of the Labour Government.

In 1979 Labour was succeeded by the Conservative government of Mrs. Thatcher, who considered the prevailing Keynesian demand management policies, no longer the appropriate instrument to combat the recession. As Walker and Sharp (1991: 271) have argued, Thatcherism may be regarded as *an opportunist response* to the perceived failure of Labour-dominated eras. The radical Tories, having gained control of the party from the traditional moderate Conservatives Tories like Mr. Heath, were in favour of a radical *laissez-faire* approach, with such policies as deregulation, tax reform, monetarism and trade union reform. The Thatcher government effectively argued that the high degree of state intervention in the economy, and the growing influence of trade unions in economic policy making had contributed to the rising public expenditures and climbing inflation levels. Especially after the 1978-1979 *winter of discontent,* the prestige and performance of the

nationalised industries in Britain was low, and the hostility towards the public sector unions was high. Due to political interference and the absence of a clear institutional framework for the nationalised industries in terms of democratic accountability, effective consumer and workers representation, the separation between the administration of public policy and the day-to-day management of state-owned companies did not work, resulting in enduring problems between management and the government over external borrowing, personnel, pricing etc. for effective consumer and workers representation (Prosser 1986; Veljanovski 1987; Graham & Prosser 1991, Foster 1992). When the nationalised industries made claims on the Treasury to cover operating losses or to finance modernisation programmes in the 1970s, the arm's length's relationship between nationalised industries and the political system eventually was transformed into one where the nationalised industries were subject to strict financial controls. The strict PSBR and EFL rules (i.e. the Public Sector Borrowing Requirement and the External Financing Limit) and the further tightening of financial controls in the mid-1970s were reasons for management of public sector enterprises to consider new ways of governing nationalised industries or more radically to escape from the public sector altogether.

For the Conservatives of the late 1970s, the role played by government in the economy had become too large and ambitious, causing major inefficiencies, excessive public sector deficits and a discouragement of private initiatives. To revive the economy and establish a favourable business environment, the following remedies were suggested: the implementation of deregulation and privatisation programmes, the abolition of the guided income and price policy, the curbing of trade union powers and an end to the tri-partite consultations in the NEDC and IRC framework on economic/industrial policy making. These *Thatcherite* policies were supported by a fiscal policy that articulated tight monetary controls by lowering the budget deficit and a proposed reduction in both the rates and progressiveness of taxation. The Thatcher government attempted to reform industrial policies by abandoning the established strategies of 'picking the winners' and 'subsidising lame ducks', qualified by Burton (1983) as *picking losers* and the *industrial subsidy morass* respectively, by shifting from defensive to positive policies (aimed at electronics and new technologies) and by promoting supportive measures for business like competition policy, deregulation and tax cuts.

The economist Littlechild (1978) qualified the functioning of the social market economy, exemplified by indicative planning, tri-partite negotiations and large nationalised industries, as the *fallacy of the mixed economy*. From a neo-liberal point of view, the following measures must be implemented: a reduction of public spending, tighter controls of the money supply, tax cuts, deregulation of sheltered markets. Furthermore, public services ought to be contracted out and state assets (nationalised industries and council houses) sold off. The Thatcherite Conservatives had a strong belief in the smooth functioning of markets and the competitive process as the best way to maximise allocative efficiency in society. In the words of Mr. Moore MP (1986: 93): *'Our main objective is to promote competition and improve efficiency. Less government is good government. This is nowhere truer than in the state industrial sector.'* The Thatcher Government regarded private ownership as far

more efficient than public ownership, and consequently insisted that the role of the state in the economy should be minimalist. The privatisation of nationalised industries would increase the economy's performance: a substitution of political control by market discipline would make state enterprises more efficient and generate substantial consumer benefits (Littlechild 1981; Beesley & Littlechild 1983). The ideology behind the deregulation and privatisation programme strongly referred to the *Hayek-ian* notion that selling state assets would enhance economic freedom throughout society and contribute to the realisation of a shareholder democracy with extensive equity ownership by citizens and employees (Hayek 1944; Veljanovski 1987). The sale of state assets and local council homes to individual shareholders, employees of the privatised companies and former housing tenants would contribute to the neo-conservative notion of *'popular capitalism'*: the nation and the firm as a group of shareholders.

Another reason to pursue a programme of privatisation was that it would raise huge revenues for the government through the once-only sale of shares and annual tax revenues and dividend yields, that could be used to reduce the governments budget deficit and finance its tax-reduction aspirations (Thompson 1990). A hiving off of ailing state enterprises such as British Leyland would reduce public sector borrowing and public expenditures even further. The Thatcher Government pleased the City and private enterprise by deregulating capital market and reforming the corporate taxation system. The process of floatation has been criticised as furnishing the City (merchant banks, institutional investors, securities houses, advertising & PR bureaux etc.) and individual investors with windfall profits. As convincingly argued by Vickers & Yarrow (1988), the equity of British Telecom, British Gas and British Airways has been undervalued and sold off in too large chunks. The sale of undervalued state assets would benefit the City institutions (financial investors, underwriters, brokers, auditors, advertising agencies etc.) by providing them large contracts and huge profits (TUC 1985).

The privatisation would also serve the straightforward political goal of re-election. The sale of state assets and low-priced council homes enabled the government to give the voting public electoral advantages like income tax cuts and instant profits. This 'buying votes'-strategy seemed to be successful, broadening the private shareholder base from two million in 1979 to more than nine million in 1988. The sale of shares might have broadened the shareholder base, but not as substantially as some say: many of the households who had bought BT shares, sold them to large institutional investors. For the Conservatives, privatisation was part of a broader strategy to break the powers of the Labour party and the trade unions which were still quite strong at that time. The level of unionisation was by comparison very high in nationalised industries and public utilities. The Conservatives considered the widespread distribution of shares and share-ownership among the employees of privatised firms, as opposed to state ownership, a major political obstacle to a possible return of a Labour government and its plans for re-nationalising the just privatised industries. The Thatcher government succeeded in disciplining and curbing union demands through a confrontational economic adjustment policy, leading to rising levels of unemployment and cutting back unionisation rates substantially. The bargaining

power of the trade unions was further reduced by a radical industrial relations policy that clearly curtailed union power *vis-à-vis* employers and the state. The Thatcher government imposed far-reaching restrictions on closed shop arrangements, union labour-only contracts, and the introduction of secret ballots (if the union wanted to retain immunity against damages).

The first Thatcher Government (1979-1982) did not have a master plan with respect to privatisation. The privatisation alternative did not even feature in the 1979 election programme of the Tories; it only emerged, rather accidentally, mid-way through their first term in office. When its monetarist polices to combat the recession proved unsuccessful in 1981 (e.g. soaring unemployment and inflation rates) and the large-scale sale of council houses to residents had turned into an enormous success due to the fact that they were sold far below their market value, the Thatcher government commenced to consider large-scale privatisation as a viable alternative. Notwithstanding the demand for a U-turn in economic policy by some leading economists and business leaders, the Thatcher Government continued with its radical pro-market strategy. The sale of state assets and the political ideas behind privatisation fitted perfectly within the rather opportunistic practices of curtailing public expenditures, breaking the power of the Labour party and the trade unions and the radical Tory thinking about free market individualism (Steel & Heald 1982; Chapman 1990). Under Thatcher rule more than one million council houses were sold to sitting tenants and several major state-owned enterprises were privatised: British Petroleum (1979-87), British Aerospace (1981-85), British Airways (1987), Cable & Wireless (1981-85), British Telecom (1984-1993), British Gas (1986-1988), British Steel (1988), Central Electricity Generating Board (1989), and the Water Authorities in England and Wales (1990). The sale of assets between 1979-88 raised more than £26m and the proportion of GDP attributable to state-owned industries fell from 9 per cent in 1979 to 5 per cent in 1990 (Hyman 1990). Almost one million jobs were transferred from the public to the private sector and a large majority of privatised workforce became shareholder in the newly established company). Although the replacement of Mrs. Thatcher by Mr. Major as head of government in 1990 was a consequence of a fierce power struggle within Conservative ranks between the radical Thatcherites and the more moderate Conservatives like Mr. Heath and Mr. Hesseltine, it did not entail a major shift in public policy. Mr. Major acted as the unifier within the party and led the Conservatives to their fourth election victory in 1992. The privatisation program looks like to be continued under the Major Government with the proposal of privatising British Rail and British Coal for the near future; the remainder of BT's shares was sold in the Summer of 1993.

One effect of market liberalisation was the sharp increase in foreign investment (especially in consumer electronics and car manufacturing), which led to a boost imports and net job losses. The plan of the Thatcher government to restructure the economy was based on two partly conflicting ideas: encouraging the services sector and reversing decline of Britain's technological leadership. To emphasise the importance of innovation, the Thatcher Government appointed a special Minister for Information Technology to superintend schemes that would support R&D in micro-electronics, fibre optics, information technology and space and to bring the UK back

at the forefront.[1] With the 1980 Industry Act, the NEB was transformed from a state holding to a facilitator of private sector investments in the 'high tech'-industries. As a consequence NEB was instructed to dispose of most of its stakes in both profitable industries (Ferranti) and its holdings in the 'lame ducks' Rolls Royce and British Leyland. The slimmed down NEB merged with the National Research and Development Council NRDC, a self-financing public body fostering scientific contacts and contracts between industry and the universities, to form the British Technology Group BTG. The new conglomerate was entrusted with the overall task of promoting and supporting commercially viable innovations. Furthermore, BTG was instructed by the government to look for private purchasers of the government-owned shares of computer manufacturer ICL and the semi-conductor firm Inmos; the mission was accomplished by the acquisition of Inmos by Thorn-EMI, and ICL by STC and Fujitsu.

One could have one's doubts about the large privatisation programme enacted by the Thatcher and Major governments. First, there is the argument that in some cases *'selling the family silver'*, as former Prime Minister MacMillan (quoted in Chapman 1990: 10) saw it, was not necessary. For example the privatised companies now performing very well under private ownership, were already economically successful under public ownership. The Conservative governments have followed a *picking the winner*-strategy in their selling off of (potentially) profitable state enterprises. British Rail and British Coal, who both performed rather poor, were not included in the original privatisation programme. Secondly, a shift from a statutory public monopoly to privately-owned utilities did not automatically guarantee more competition. To bring about genuine competition, new rules and adequate regulatory controls had to be established to compensate for the loss of direct government control. As the persistently dominant position of British Airways, the electricity generating and distribution companies (NatPower, PowerGen and National Grid) and British Telecom in their respective markets illustrates, the short term profits of getting these institutions out of the public sector and generating proceeds for the Treasury, seemed to be more important than the long-term aim of increasing competition and efficiency (Richardson 1994). With the exception of the National Bus Company and the Central Electricity Board, the utilities were transferred without altering their corporate structure to the private sector (i.e. no divestitures) and new entry and competition was restricted to some fringe market segments.

1 The idea that one minister and government department should be responsible for the coordination of policies and actions on the promotion and development of IT and its applications was originally suggested by the Advisory Council for Applied Research and Development (ACARD 1980). Being aware of its weak manufacturing base and the potential of a competitive IT-industry, in March 1992, the Minister for IT set up a Committee, chaired by Mr. Alvey (Director Technology British Telecom), to 'advise on the scope for a collaborative research programme in IT and to make recommendations' (DoI 1982a: 5).The Committee argued that the UK required strong domestic capabilities in this promising sector, since it could not depend upon other countries supplying them. Originally set up as a collaborative effort between industry, research institutes and the government to promote micro-electronics, fibre optics, and information and space technologies, the orientation of the project shifted into military applications with the Ministry of Defence and its major military contractors, Plessey, GEC, STC and Ferranti, becoming the dominant players in the project.

Privatisation freed the corporation from bureaucratic scrutiny with regards to its operational and strategic activities, replacing it by a new regime in which the corporation's management was accountable to its customers and shareholders (of whom the government was still a very important one). However, the UK privatisation programme has been criticised as merely changing the public monopolies of network-industries into private monopolies (or duopolies).[2] The Tory belief in a free market economy and the active promotion of competition in sheltered markets was subject to the Treasury's interest in attracting potential investors to buy the assets of a strong and integrated monopoly provider and turn the large-scale and complex floatation into a success. The industries to be denationalised were not broken up into competitive parts (like it had happened in the USA) but were floated more or less as a whole, leaving the government with company law techniques (e.g. golden shares) and licensing requirements to ensure a minimum level of control over these strategic industries.[3]

Although the government did not completely relinquish control over the privatised key industries, the move away from state intervention and public monopolies towards market-led solutions would increase competition within and between industries and thus provide better and more efficient services. To improve customer orientation and consumer choice and increase efficiency, the public administration was reorganised in the 1980s and early 1990s (Hogwood 1994). Policy formation and implementation were separated by the creation of small core policy departments and executive service delivery agencies with substantial managerial autonomy. The responsibility for determining and enforcing the delivery of public services to agreed targets was delegated within a regulatory framework (e.g. the implementation of the Citizen's Charter). Market testing was introduced for all executive agencies to identify whether any potential savings could be obtained.

In order to create and supervise a more competitive business environment, a new regulatory framework was established in the utility sectors. Independent regulatory agencies were set up, like OFTEL (Office of Telecommunications), OFGAS (Office of Gas Supply), OFWAT (Office of Water) and OFFER (Office of Electricity Regulation), that have a responsibility to secure fair competition among market players and to protect consumers' interests by controlling prices and ensuring a certain level of quality is maintained. These single industry agencies have the power to lay down enforce specific terms in the utility's license, but no powers with respect to the licensing itself or general competition legislation. The national government

2 Veljanovski (1991b: 21) has referred to the particular combination of rapid privatisation, less competition and more regulation: '*The political imperative to get the nationalised industries into the private sector as fast as possible resulted in a significant trade-off in favour of monopoly and regulation, and away from competition. This required the regulation to act as a 'surrogate for competition'*'.

3 The government could still have a say in the company through the nomination of directors, a residual shareholding, special shares and overall shareholder accountability of management (Graham & Prosser 1987). The government's *golden share* of the privatised company contained certain exclusive provisions in the company's articles of association and a right of veto to preclude any changes in it. For instance, it could impose restrictions upon foreign ownership, limitations on the voting shares, government-appointed directors, special shares preventing a hostile take-over, British nationality of the CEO, disposal of assets, restrictions on issue of new voting shares (Hyman 1990).

kept a final say with the administration and regulation central of UK telecommunications. The Secretary of State has the exclusive power to issue licenses and appoint the head of the regulatory agency. In case of detected unfair competitive practices and/or abuse of monopoly, the regulatory agency has to refer these practices to the Office of Fair Trading, which has the power to refer to the Monopolies and Merger Commission. Initially, these regulatory agencies were poorly equipped in terms of expertise and staff to control the large privatised agencies, but after some teething problems they have developed a certain responsiveness to stakeholders's complaints about poor quality of service and unfair competition. Some of the newly created agencies have established themselves as strong autonomous powers in the supervision and regulation of the privatised utilities and the promotion of industry-wide competition (Veljanovski 1991a; Graham & Prosser 1991; Foster 1992; NCC 1993). OFWAT and OFGAS, for instance, were faced with public criticisms of unreasonably high profits, poor performance and large increases of basic salaries and fringe benefits (e.g. share options) of chief executives and directors (the so-called 'fat cats'). At the same time, employment levels in gas were reduced from approximately 100,.000 to 50,000, and public health was put at risk when water companies refused to invest in improving water quality and ignored environmental regulations. OFTEL and OFGAS were challenged by continuous technological developments and persistent market dominance by the incumbents blocking the introduction of workable competition.

4.4 *Monopolisation of Telecommunications in the United Kingdom (1878-1979)*

The Established Telecommunications Regime

After an initial period of private enterprise between 1878-1911, the development and provision of telephony in the UK has been part of the public monopoly of the Post Office for almost a century. From 1912 until the early 1980s the Post Office had exclusive control over the provision of postal and telecommunications services. The Post Office was furthermore involved in girobanking and in charge of allocating and providing wavelengths for the broadcasting services of the BBC and IBA channels. PO's telecommunications monopoly entailed all services associated with the running of the telephone and telex network, including international telecommunications and all peripheral equipment (with the exception of PABX with more than 100 extensions). The Post Office was required to maintain separate accounts for each of its businesses. The results of its branches were mixed: the National Girobank was loss making, the Postal Service struggled to break even and the Telecommunications Function was highly profitable. Between 1969-81 the Post Office was dissolved into a holding company with four subsidiaries: Telecommunications Services, the Postal Business, Giro and Remittance Services, and the newly emerging Dataprocessing business. In terms of revenue, profitability and workforce, Giro and Dataprocessing were small when compared with the postal and telecommunications business, with Telecommunications beginning to outstrip the Postal Function in importance from the early 1960s onwards. After 1969 with the enforcement of the 1969 Post Office

Act, the Post Office, although still owned by the state, moved away from direct government control. It changed from a government department into a state-owned statutory corporation, while still keeping its public monopoly on telecommunications and postal services. Management of the Post Office was no longer directly politically responsible (i.e. headed by a Minister), but became headed by a chairman, who was appointed by and answerable to the Secretary of State for Industry. The Post Office was also given powers for some external borrowing (although it still needed the permission of the Treasury (see figure 4.1).

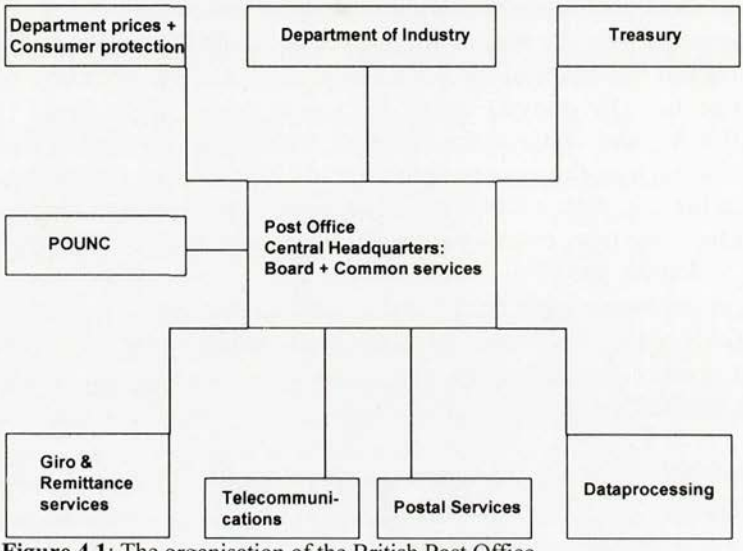

Figure 4.1: The organisation of the British Post Office

Traditionally the Post Office was a Civil Service Department with a workforce of about 400,000. Before 1969 it was headed by a Minister, the Postmaster General, that was responsible to Parliament. The Post Office was backed by the Post Office Advisory Council, that functioned as a consultative platform where the government, the Post Office and some of its societal stakeholders discussed relevant policy issues. The Post Office was politically accountable to every aspect of the company's practices, operations and planning. In practice this meant that its investment schemes, industrial relations and tariffing were subject to detailed political supervision by the Cabinet and Parliament. The Department of Trade and Industry DTI was the major regulator and sponsor of the communications sector in Britain: its Secretary of State was responsible for ensuring that the Post Office would operate in the public interest. The Department of Prices & Consumer Protection (later incorporated in the Department of Industry) was in charge of monitoring and controlling the prices set by the PO. A statutory body existed alongside each national industry with the function of safeguarding the interests of consumers, namely the Post Office User's National Council POUNC. The Treasury determined PO's budget in competition with the financial requirements of the other government departments. The investment schemes of the Post Office were constrained by the Public Sector Borrowing Requirements

and the External Financing limits, linked to the overall level of proposed public expenditures. Three other ministries were also somehow involved in telecommunications policy: Foreign Commonwealth Office in charge of international and commercial trade, the Ministry of Defence sponsoring defence-related technologies, and the Home Office, succeeded by the Department of National Heritage, responsible for broadcasting policy . Parliament and its Select Committee on Nationalised Industries scrutinised the performance of the Post Office and the way its sponsoring minister and the Prices Department were carrying out their responsibilities.

Another major player in UK telecommunications is Cable & Wireless C&W, officially established as a merger between Eastern Telegraph and Marconi in 1934. Originally C&W was one of the largest international telecommunications enterprises in the world, running telegraph services between the various parts of the British empire and Commonwealth. After the phasing out of telegraphy in the 1960s, C&W moved into intercontinental cable and satellite links and it became a leading operator in Britain's overseas belongings with a strong base in Hong Kong and the Caribbean. C&W was nationalised by the Labour government in 1947 and privatised by the Conservatives in 1981. In some sense C&W could be regarded as the opposite of Post Office/British Telecom: the first was involved in overseas activities and -although in public ownership between 1947-81- never subject to public scrutiny and political intervention, the second was in charge of operating telephone services at home and subject to detailed political interference in its day-to-day management by the Treasury and Parliament, mainly on issues dealing with macro-economic policy and public expenditures. After its privatisation in 1981, C&W became actively involved in its home market through its subsidiary Mercury.

The unionisation rate of the Post Office/British Telecom's workforce, like the other nationalised industries and public utilities in Britain, has always been high. In 1984 98 per cent of British Telecom's staff was unionised: the Post Office Engineering POEU (engineers) represented about 131,000 members, the Society of Telecom Executives STE (managerial and professional staff) about 33,000, the Union of Communications Workers UCW (rank and file grades) 39,000, the Civil Public Servants Association CPSA 32,000 and the Communications Manager's Associations CMA (managerial staff in operating and ancillary services) was relatively small with representing 5,500 of BT personnel (De Zoete & Bevan 1984). In 1984/85 POEU incorporated the clerical workers and became the NCU. In the period before privatisation and liberalisation, the industrial relations system of the Post Office/British Telecom could be characterised by a high degree of cooperation with the unions having kept a nearly 'clean record' for industrial action (Smith & Terry 1993). There were elaborate consultative and consensus-seeking procedures, dealing with collective bargaining, the introduction of new technology and the marketing of new products and services. The Post Office/British Telecom unions had established long and close links with the unions federation TUC, in which they participated, and the Labour party, by sponsoring three MPs.

BT purchased about 90-95 per cent of its switching and peripheral equipment from the *ring* of British manufacturers (POEU 1964). The monopsonistic equipment market was made up of three major manufacturers, GEC Telecom, Plessey and STC. These manufacturers, organised in the Telecommunications Engineering and Manufacturing Association TEMA, had established cartel-like arrangements of dividing BT's bulk contracts among themselves and joint standardisation with the Post Office/British Telecom (e.g. JERC: Joint Electronic Research Committee). In 1990 the TEMA manufacturers amalgamated with the Association of the Electronics, Telecommunications and Business Equipment Industries EEA. The equipment suppliers were well aware of their dependence upon BT for large procurement contracts by strongly opposing the plans of BT to enter manufacturing and keeping their *club* exclusive by obstructing imports and new entrants on the UK market. In equipment manufacturing the record of the UK was mixed, with an excellent position in research and development and a rather mediocre stand in production, sales and exports. The engineers of the R&D laboratories of BT, STC, GEC and Plessey had an impressive record with inventing and developing optical fibres, PCM technology, digital PABX, videotex/Prestel) and digital switching. In manufacturing, however, the UK's record was less impressive; the industry was not competitive enough and, as a consequence, exports were lagging behind. A clear example of this rather mixed record of the British equipment industry can be found in the development of the System X. This digital switch, designed by BT and jointly produced by Plessey and GEC, was originally intended to upgrade switching in the public network and thus recapture lost export markets. The 'revolutionary' System X, however, turned out to be a commercial failure.

The interests of telecommunications users were represented by four organisations: large businesses by Telecommunications Managers Association (TMA), smaller businesses by the Telecommunications Users Association (TUA) and residential consumers by the Consumers' Associations (CA) and the National Consumer Council (NCC). Especially TMA and TUA were influential in public policy making by successfully persuading the government to embark upon a more commercial and competitive approach in the telecommunications domain and urging BT to improve its quality of service by providing its high-capacity and customised business services more competitively (Cawson *et al* 1990: 357).

The Formative Years of the Post Office/British Telecom Monopoly

The telephone was first introduced in Britain in 1876 when its inventor Bell gave a demonstration in London. The official history of telephony started two years later with the establishment of the Telephone Company Ltd. in London, using the Bell patents, quickly followed by the creation of the Edison Telephone Company, using other patents, eventually leading to an amalgamation of the two, within a year, into the United Telephone Company. The Post Office saw the emergence of telephony as a threat to its postal and telegraph monopolies and in 1879 decided to take action in the courts. The 1869 Telegraph Act had granted the Post Office a public monopoly on the inland telegraph business and as a consequence it had acquired all private telegraph companies. The court proceedings honoured the Post Office's argument by

stating that a telephone conversation was like a 'tele-gram' and hence telephony was subject to the 1869 Telegraph Act. The government's reaction to the ruling was somewhat ambiguous, hesitating between competition among private companies and competition between the Post Office and private firms. It allowed the Post Office to build a publicly owned exchange system, while at the same permitting the development of the telephone system by granting private firms licenses to operate telephone networks. For example, the United Telephone Company UTC, equipped with both Bell and Edison patents that expired in 1890-91, was given a 31-year license to operate a telephone network starting from 1880. The Post Office, seeing its telegraph system more and more threatened by long distance telephone communications, found its pleas for a state-controlled telephone system falling on deaf ears (Hills 1993). To enlarge its control over the activities of the UTC-company and other private companies, the Post Office needed political approval and it was especially the Treasury, fearful of large financial losses, that opposed the plans for competition between public and private companies. The Treasury effectively argued that the role of the state in telecommunications should be supplementary and the aim should not be to supersede private enterprise (Hazlewood 1953).

In 1884 the restrictions on the issuing of licenses were removed and long distance telephony was liberalised. The government's aim of developing a private enterprise system with nation-wide coverage was reached but in a way that was neither foreseen nor desired. Just before the main patents expired in 1889, NTC controlled the entire telephone system in Britain (Pitt 1980). A national private monopoly had emerged with the take-over of small local private operators by United and the absorption of the United Telephone Company and its associated companies by one of its subsidiaries, the National Telephone Company. In 1891 NTC's monopoly was challenged by an outsider, the New Telephone Company, that had started to compete with the NTC's networks in London. It proved to be unsuccessful, however, and one year later it was acquired by NTC. As a consequence, political discontent with the uncontrolled NTC monopoly triggered a demand for a nationalised telephony system: especially the Post Office, seeking to protect its ailing long-distance telegraph service, argued for full control of the long distance telephone service. A purchase of these private networks, however, was out of the question as the Treasury would oppose it. The Treasury, still arguing that the role for the Post Office in the development of telephony should be moderate, argued that such a take-over would involve large sums of money which the Treasury was unwilling to pay. Between 1892 and 1897, telephony gradually moved into public hands, when NTC was requested to sell its existing long distance lines to the Post Office and renounce any right to build trunk lines in the future. After the gradual nationalisation of long distance telephony, NTC's private monopoly was once more challenged by the government's decision in 1898 to authorise municipalities to develop effective competition. One year later, the government honoured the request by municipal authorities to establish and operate a local network. The Post Office was also authorised to develop a competitive network in London. The government's strategy to challenge NTC's private dominant position turned out to be counterproductive and contributed unintentionally to a further concentration in the telecommunications

industry. The majority of municipal authorities sold their licenses to either the Post Office or the National Telephone Company.

The next step in the development of telephony from a private into a public service was taken in 1901, when the Post Office and the National Telephone Company started negotiations on the acquisition of the NTC-networks by the state which would result in the nationalisation of Britain's telecommunications system. In 1905 a final agreement was reached whereby the Post Office would buy out the NTC and acquire its networks when its license would expire at the end of 1911. From 1912 onwards the Post Office became exclusively responsible for the country's telephone service with the exception of the two municipal systems of Portsmouth and Kingston upon Hull. The first was incorporated within the Post Office one year later and the second was (and still is) under control and managed by the municipal authorities of Kingston upon Hull. This exception is a reminder of the early days when networks were developed by private enterprise and local/regional authorities. After the successive stages of market competition, private monopoly, state control of trunk lines and municipal competition, the nationalisation of private networks in 1912 solved the problem of a natural monopoly by bringing the various networks under the unitary control of the Post Office (Perry 1978). The structural problems concerning centralised decision making in the Post Office and the strong bureaucratic controls of the Treasury, precluding it from an engagement in long-term planning were, however, only solved more than fifty years later. The consolidation of the NTC and the Post Office brought with it new organisational problems. The differentiation between the postal and telecommunications function of the Post Office was inadequate and the integration, especially within the telecommunications function was complicated (Pitt 1980). There was the structural question of the telephone branch effectively being controlled by the postal function and of frictions between lay officials (line) and engineers (staff) throughout the entire organisation, and at local level between telephone management and official Post Office managers.

In 1920 a Select Committee was set up to evaluate the functioning of the Post Office with respect to telephony. The Committee's 1921 report criticised the Post Office as being too bureaucratic, too much oriented towards the postal services and badly equipped to cope with the complex demands of providing telephone services. It was restricted internally by ineffective integration and differentiation and externally by political interference and budgetary controls. The Committee recommended a more commercial attitude, a separation between the mail and telecommunications functions and an increase in network investment levels. These suggestions came to nought, just like the recommendations given by the 1932 Committee of Inquiry, the so-called Bridgeman Committee, on the functioning and status of the Post Office and the reform of the postal and telecommunications policies (Pitt 1980). The installation of this Committee was encouraged by a memorandum from 320 MPs sent to the then Prime Minister pressing for an inquiry into the functioning of the Post Office and a strongly suggesting it should be given more space to operate as a business rather than a government department. The Bridgeman Committee argued that in order to reduce its centralised management style and the blurring between executive and administrative functions the Post Office needed more autonomy from government,

enabling it to manage the postal and telecommunications services more efficiently and effectively. The Committee asked for more corporate autonomy, less Treasury control and a more business-like, decentralised and flexible management style. The economic recession and the looming war in the 1930s, meant that most of the Bridgeman recommendations were not carried out, with the exception of the plan for regional reorganisation of the Post Office, which was implemented directly after the second world war. The Committee further proposed to hive off the telecommunications function into a semi-independent public utility, while keeping the departmental structure for the postal services. This proposal, however, was effectively counteracted by a coalition of postal officials, the Treasury and public sector unions. Because of the universal character of its public networks, the tight linkage with the national government and the interface with a centralised trade union movement, the Post Office remained a highly centralised organisation.

Immediately after World War II with telecommunications having played a crucial role in the national defence system and the Labour government implementing an impressive nationalisation programme, the question of putting the Post Office at arm's length from the government was out of the question. In the 1950s, the record of the mail services was good, with services being adequate and relatively cheap. The telephone services, however, still suffered from under-investment and shortcomings in service provision, with Post Office unable to meet buoyant demand. The lack of quality was caused by shortages of equipment, funds and staff. Constrained externally by the Treasury's restrictive policy and internally by a subordination of the telecommunications engineers to postal officials, the Post Office found it impossible to plan the development and the expansion of its telephone networks effectively in the post-war period (Hills 1984). From the mid-1950s onwards, the Tory Government attempted to free the Post Office from excessive Treasury supervision and give it more control over its day-to-day management. More than 20 years later, the Bridgeman recommendations for structuring the Post Office as a (semi-)commercial enterprise were partially adopted, when the Post Office took over responsibility for balancing its own income and expenditures. Furthermore, the Government announced its intention to promote participatory and functional management and to make the Post Office more commercial and cost-conscious. The coming into force of the 1961 Post Office Act was another step forward in the development of more flexible management structures for the Post Office and a partial reduction of detailed government oversight in that it separated the Post Office's finances from the Treasury. The Post Office, however, could not reach an agreement with the Treasury on a bigger capital programme and the bulk of its budget still required parliamentary approval (i.e. staff payments, investment). In the 1960s, the Post Office's management clearly wanted to be put at arm's length from the government administration and, consequently, to become a separate nationalised industry. This demand was voiced by Postmaster-General Mr. Wedgwood Benn (1987: 197) in 1964: *".. (it became) increasingly clear to me that a Civil Service Department cannot generate the impetus to make a growth industry grow and expand at the necessary rate. The attitudes are too rigid, the wage structure is too tightly under Treasury*

control and the political supervision of prices and practices makes the job impossible."

The idea to convert the Post Office into two or three nationalised industries and dividing it into separate public corporations for the postal, giro and telecommunications services, was regarded as too radical. The Government, strongly supported by the large UPW union, opted in favour of maintaining one unified departmental organisation. The Select Committee on Nationalised Industries of the House of Commons (1967) held an enquiry into the Post Office and attempted to set out guidelines on the responsibilities and organisation of a future Post Office. The Select Committee argued for a retention of its existing power and authority structures with a small powerful Main Board, responsible for all major decisions and accountable to the Minister, and a degree of separation between the telecommunications and the postal functions. In 1967, the Government finally decided that the Post Office should be managed along (more) commercial lines if it was to be run efficiently. It suggested the creation of a single statutory corporation headed by a single executive board in which the telecommunications and postal businesses could operate relatively autonomously. At the Post Office's central and regional headquarters, the two functions were placed under separate managing directors, each entrusted with their own personnel, finance and technological support. The enactment of the Post Office Act in 1969 transformed the Post Office from a Government Department into a public corporation with statutory powers and duties, subject to the financial controls of a nationalised industry. The Post Office was released from direct political accountability by the division of the function of the Postmaster-General between the sponsoring Minister of Post and Telecommunications, (in 1974 replaced by the Secretary of State for Industry), and the chairman of the Post Office Board. The responsibility for personnel was transferred from the Civil Service Commission to the new public corporation. Under the new legal provisions, the single Board was responsible and accountable for all the activities of the Post Office and included besides a chairman and a deputy chairman, three managing directors for Telecommunications, Posts and Giro/Dataprocessing, as well as members for industrial relations, technology and finance. Post Office was established as a self-financing public service with more discretion in its corporate investment and, consequently, external borrowing on the stock market was allowed (although Treasury approval was still required). It was believed that the new PO's corporation would establish more market-based relationships with its three preferred suppliers, herewith increasing the efficiency, dynamism and performance of the British telecommunications industry (Hills 1984).

The Post Office's internal organisation became more decentralised with its division into organisationally distinct functions and with more responsibilities being delegated to local and regional management levels. The former departmental hierarchy was replaced by a corporate structure, comprised of a common National Board and four autonomous Businesses, to be run by separate management boards with distinct accounts, finance and accounting schemes. The two large businesses, Mail and Telecommunications, were administered on a three-tier basis with a National Headquarters, 11 regions and 61 areas. Although its Postal and Telecommunications

Functions were substantially reorganised and established on a more regional basis, the Post Office remained strongly centralised and conservative organisation with a powerful and overloaded National Board. In the new situation the Post Office would have more autonomy in corporate matters such as tariffs, staffing, investment, expenditures and procurement. In the execution of its various tasks, the Post Office would operate within broadly defined ministerial and Treasury guidelines. A new body was set up, called the Post Office Users' National Council (replacing the Post Office Users' Council of 1966), to represent the interests of customers. The 1969 Act stipulated that the POUNC members were appointed by government and that the council had to be consulted whenever important decisions had to be taken by the Post Office Board.

Although the new framework gave the Post Office more autonomy in its corporate functioning, the persisting problems of capital shortage, over-centralisation and slow decision making and poor service provision were only poorly addresses. There had been a clear devolution of authority within the hierarchical Post Office organisation and a further proliferation of its responsiveness towards the diverging markets of the postal and telecommunications services. However, the hope that the Post Office as a public corporation would be permitted to operate with a considerably higher degree of independence from central government than before, was only partially fulfilled. While allowing Post Office-management a measure of commercial freedom, the Government would ultimately determine the direction of the strategy Post Office should follow. In 1970 the Tory government put forward some sketchy plans to liberalise monopolistic markets and privatise the Post Office. Minister Chataway announced the opening up of some parts of the posts and telephone monopoly to private competition and the denationalisation of some parts of the Post Office organisation. The then Chairman of the Post Office, Lord Hall, totally disagreed with the Minister's point of view, favouring an opposite strategy of enlarging Post Office's control on telecommunications by diversifying into manufacturing. The Post Office seriously considered the alternative of acquiring a (public) stake in the privately-owned equipment industry (notably by taking over STC). In its plea for entry into equipment manufacturing the Post Office was supported by the largest union, the POEU, that as early in 1964 had voiced severe complaints about the unfair trading arrangements between the Post Office and its preferred suppliers': *"There is overwhelming evidence of the need for full public investigation of the manufacture of telecommunications equipment in Great Britain and of the terms on which its is supplied to the Post Office. Facts already established show a tightly-organised 'ring' of companies in virtual control of the market and restrictive practices which may lead to unnecessarily high prices paid out of public monies (POEU 1964: 3)."* POEU therefore suggested that the Post Office be allowed to set up its own production unit and enter the exchange market in competition with private suppliers. At that time the two contradictory proposals of either liberalisation or vertical integration were regarded by the policy community as too controversial. The political disagreement led to a stalemate in policy making with the Minister's plans postponed and to the dismissal of the Postmaster General.

As a consequence of the 1972-74 price restraint policy of the Heath Government, the Post Office had slipped from a relatively comfortable position to a large financial deficit. The Post Office, amidst a far-reaching reorganisation process to adapt to the new institutional structure set by the 1969 Act, was constrained by excessive government intervention in its plan to modernise the telecommunications network and increase the productivity of its services. The decision of the Chancellor in December 1973 to impose an immediate 20 per cent cut in the 1974-75 investment programme without consulting the PO, strongly disaffected the company's financial performance and staff morale. The statutory price restraint policy forced the Post Office to keep its prices down, even to loss-making levels. To restore the Post Office to profitability, a return to economic pricing was implemented in 1975. The heavy increase of the charges for public services and the reductions in postal services' gave rise to wide public concern. Corby (1979: 242) characterised the government's behaviour towards the Post Office as a 'penny wise pound foolish' approach: price rises and cuts in service provision were allowed or blocked according to the political needs of the moment rather than customer demand. Besides political interference and shortage of capital, other causes for the rather poor performance of the Post Office and its telecommunications subsidiary were the highly bureaucratic and centralised practices of its management and fundamental weaknesses in marketing. PO's organisational structure was inadequately differentiated to perform its tasks with respect to the provision of the posts and telecommunications services efficiently and effectively (Pitt 1980). Major decisions on such matters as tariffs, investment policy, pay issues, procurement and R&D policy as well as major staffing issues remained under fairly tight centralised controls. A lack of (telecommunications) expertise and initiative at Board-level, however, caused major delays in corporate decision making and as a result various strategic opportunities were overlooked. Furthermore, the Post Office found itself impeded in the execution of its business by a rather cautious and defensive attitude towards marketing.

In 1976 the Labour government appointed a Committee of Wise Men to review the internal structure of the Post Office and the institutional framework established by the 1969 Act and to make recommendations on these aspects. This Review Committee, also known as the Carter Committee (named after its chairman Mr. Carter), consisted of eight members, drawn from the Civil Service, trade & industry and the labour unions. The Carter Committee (1977) made it clear that the Post Office suffered from several organisational weaknesses and managerial shortcomings and it suggested a complete reorganisation of the Post Office and its relationship with the Government. The Carter Committee regarded the relationship between the Post Office and the government as too close, chaotic, lacking in consensus on strategic objectives and long term planning. The Post Office's investments, wages and tariffs were subordinated to the macro-economic requirements set by the government. The Post Office was further hampered in the pursuit of its social and commercial objectives by detailed political and bureaucratic meddling. A related weakness of the Post Office's structure was the lack of delegation, limited commercial freedom of local management and a low market responsiveness, that led to over-centralisation, slow decision-taking and risk-aversive management.

The Carter Committee recommended that the Post Office be divided into two separate corporations, and -where possible- power be delegated to local operating units. The Committee suggested that these new companies be entrusted with the 'public' objective of breaking even and minimising costs rather than the 'private' objective of maximising profitability. According to the Committee, the differences between telecommunications and the postal services had become too large and too fundamental to be marketed effectively by one integrated PTT-administration: the former was capital-intensive with expanding volumes of supply and demand and the latter was labour-intensive with static and saturated economic characteristics. The Postal and Giro Services on the one hand and the Telecommunications and the Dataprocessing Service on the other, needed to be separated into two autonomous state-owned statutory corporations, to be named the Post Office and the Telecommunications Authority. The Carter Committee furthermore proposed a Council on Post Office and Telecommunications Affairs, that would fulfil an advisory function to the Post Office Board. The Committee believed that such a 'neo-corporatist' Council, in which government, trade unions, consumer organisations, industry and independent experts were represented, could fulfil a consultative role with respect to the examination of the corporate plans, strategies and capital investment programmes of the two Businesses as well as any matters of national concern. The Council would also be responsible for the representation of consumers. At that time the consumer watchdog POUNC had been rather ineffective, showing major shortcomings in the representation of interests (lacking expertise, recruited from the Civil Service) and no formal political powers were attached to its recommendations. The Committee argued that the integration of POUNC into the Advisory Council would strengthen the position of consumers. Additionally, the Committee proposed certain relaxation of the restrictions on the supply of PABXs and other peripheral equipment to be relaxed.

The Post Office Board (PO 1977) observed a close commonality between the proposals of the Carter Committee and views within their own ranks. The Post Office agreed with the suggestion of dividing the telecommunications and the postal services into separate authorities. The Post Office Board was against the installation of an advisory Council on Post and Telecommunications Affairs because this would touch upon its corporate autonomy and would further complicate its already complex and overcentralised decision making process. The Council proposed by the Carter Committee would simply add 'another tier to the structure (..), and create confusion over areas of responsibility'(PO 1977: 4). Instead, the Post Office suggested to widen Board membership to include employee and consumer participation. The Post Office Board was susceptible to the Committee's plan to improve its management style and corporate structure by delegating decision making to decentralised business functions and introducing board membership of workers and consumers representatives and promoting experiments with industrial democracy at the local and regional levels of the corporation (Prosser 1986). To prevent the Government from severe capital cutbacks and tariff changes and to allow for appropriate infrastructural planning, the Post Office demanded that financial targets be set for the mid-term. The Post Office strongly opposed the Committee's sketchy proposal to liberalise some parts of the

terminal equipment market. In its view the interests of all users and the safety and compatibility of its network would be best protected by PO's integral policy: all subscribers' apparatus should be supplied, installed and maintained exclusively by the Post Office (permitted peripheral equipment, like answering machines, modems, and dataterminals excluded).

The Post Office Engineering Union (POEU) (1977), representing mainly engineering and clerical servants in the telecommunications branch, supported the Carter proposal of a functional separation. Together with the CPSA and SPOE (now STE), the POEU argued in favour of replacing the single Central Board by distinct national management boards, directly accountable to the Secretary of State (Carter Committee App. 1977). Such a split between telecommunications and the postal business would make the Post Office more answerable to public demands by strengthening its responsiveness to customer interests and increasing its marketing efforts. The POEU furthermore advocated a split of the Post Office into two (or possibly) three corporations: the Data Processing Business could be included in the Telecommunications Service and the Giro Service could either be incorporated in the Postal service or be merged with the National Savingsbank to create a new State Bank. With respect to industrial relations the POEU argued for greater union participation and representation in the Post Office's corporate planning. Such an involvement would stimulate the evolution of an official tri-partite planning system, involving Government, Management and the Unions. The UPW (now UCW) and the Post Office Management Association (now CMA) were in favour of keeping the postal and telecommunications functions integrated within the Post Office (Carter Committee (1977b). Their arguments against a separation of the Post Office referred to the extra costs and complications associated with dividing R&D, property, personnel, industrial relations systems, transport equipment and supportive business services, among autonomous telecommunications and postal administrations.

Like their sponsor the Post Office, all the unions were against any liberalisation of equipment supply, because this would raise problems of systems compatibility and lead to an attempt by private enterprise to cream the skim off the profitable areas of PO's business. The POEU, supported by its union partners and to some extent by the Post Office itself, promoted the idea of Post Office acquiring a substantial manufacturing capability of its own (e.g. by acquiring at least one of its manufacturers). Post Office's main suppliers, organised in the TEMA association, were against the idea of the Post Office diversifying into manufacturing, because the industry's production was already sufficient. The equipment manufacturers, basically, proposed a prolongation of the traditional close ties with the Post Office and the national government (Carter Committee Appendix 1977). The producer STC favoured the liberalisation of peripheral equipment, facilitating and encouraging a greater availability of specialised equipment.

The then Labour government deferred judgement in its response to the Carter recommendations, partly as a consequence of the Winter of Discontent of 1978/79 and the concomitant change in government and a strong division within the labour unions' movement on the separation issue. The POEU with its strong representational

base in telecommunications function supported separation and the UCW with its strong base in the postal function opposed it (NCU 1992a). After more than a year of extensive consultations with the major stakeholders, the Labour Government responded to the Carter Report with the publication of 1978 White Paper. At first the Government reaffirmed that the postal and telecommunications services would remain under the statutory monopoly and that a future Post Office would remain in public ownership (DoI 1978). The Government accepted the Committee's proposals aimed at increasing the powers of POUNC and introducing more effective monitoring and performance standards. It rejected, however, the alternative of a final division within Post Office's structure between the postal and telecommunications businesses and the installation of a new Consultative Council. The Labour Government suggested postponing a decision on separation because of the Post Office's two-year experiment with industrial democracy that had already started and the ongoing process of decentralising management: *"The Government would not wish to take such far-reaching decisions on the future structure of the Post Office before it has had a chance to assess the results of the current devolution of managerial responsibility and of the two-year experiment on the Post Office Board; this means that legislation cannot be brought forward in the present Parliament."*(DoI 1978: 5)

For the Labour government the pilot scheme within the Post Office corporation was a test case for whether the existing system of industrial relations in state-owned corporations could be reformed and made more cooperative by the implementation of various bi-partite and tri-partite measures. The experiment included an extension of membership of the Post Office Board to include trade unions representatives, a senior civil servant from the Department of Industry and experts familiar with consumer affairs, followed by an expansion of the participation arrangements for workers at local and regional levels of the corporation. The Government was against the creation of a new Council on Post and Telecommunications Affairs: this would introduce an unnecessary level of decision making and 'detract from the role of the Board and blur responsibility (DoI 1978: 7)'. The Government did not react to the suggestion made by the Carter Committee to liberalise the market for peripherals.

After almost 60 years of negotiations the measure to separate the telecommunications from the postal services was finally carried out by the subsequent Conservative Government. In 1981 British Telecommunications (BT) was hived off from the Post Office and established as a new public corporation. In the new setting the Post Office continued as a 100 per cent state-owned corporation providing postal services (through the Royal Mail) and running the Girobank (a merger of Giro and the National Savingsbank). At the end of the 1980s the Post Office was further slimmed down when the Girobank was privatised and was acquired by the Alliance & Leicester Building Society in a trade sale. To sum up, two factors have dominated the period of constructing and consolidating the UK telecommunications monopoly: political interference through the tight financial controls set by the Treasury and Post Office's inappropriate organisational structure, being highly bureaucratic and centralised and ineffectively differentiating between the postal and the telecommunications function.

4.5 *De-monopolisation of Telecommunications in the United Kingdom (1979-1994)*

From Public Monopoly to Managed Competition (1979-1991)

In their 1979 Election Manifesto the Conservatives identified the large role of the state as the major cause of Britain's economic malaise. After its 1979 election victory the Thatcher government at first developed a policy of running nationalised industries more efficiently and reducing the state's holding in nationalised industries by selling off profitable state-owned companies (British Aerospace, Cable & Wireless). At that time (1979-81) the alternative to the privatisation and deregulation of public utilities was not yet acknowledged. With respect to telecommunications policy, the aim of the Thatcher government was to hive off the Telecommunications Function from the Post Office and to introduce competition to make British Telecom (BT), the Post Office subsidiary, and the domestic equipment industry more efficient. The liberalisation measures were instigated by BT's outmoded network and poor record in innovation, service delivery and overall performance (Wood 1994). BT was handicapped by low investments, outmoded work practices, lack of choice, waiting lists, poor service provision and rising charges. The domestic electronics industry suffered from major organisational inefficiencies and rapidly decreasing world market shares: Britain's share in the world's equipment market had fallen from 25 per cent in 1969 to 5 per cent in 1979 (Solomon 1986).

The Department of Trade and Industry proved susceptible to the political arguments for liberalising terminal equipment supply and 'non-voice markets', as put forward by the business customers of BT (Beesley 1981b: 20; Cawson *et al* 1990: 92-93). Large telecommunications users, like British Airways, ICL, IBM, and other companies dependent upon reliable and specialised facilities, were criticising PO's sluggish quality of service and the poor performance of its network (Carter Committee Appendix 1977: 395-426). They had lodged complaints about the PO's inability to meet business demand: bureaucratic maintenance and installation procedures, time-consuming approval of equipment, major shortcomings in its commercial and marketing capabilities and the absence of quantity discounts for its bulk users. At the end of the 1970s, the City of London saw its position as being one of the few global financial centres deteriorating as a result of relatively expensive trading costs (M. Hall 1987). In order to prevent foreign and domestic securities business draining away from London, the City had commenced improving the efficiency of the Stock Market by modernising its communications and computer systems. However, the City's direct demand for fast, reliable and cheap datacommunications facilities and a first-class communications infrastructure could not be immediately met by BT/PO. Initially, the focus was on restricting the PO's exclusive responsibilities with regards to network and service provision; its monopoly on terminal equipment approval and supply should be lifted, according to the influential Advisory Committee on Applied Research and Development (ACARD 1980: 43): *"We recognise that as a consequence of the liberalisation of the Post Office's monopoly on terminal equipment could be the loss of this market to foreign competition and an increase in imports of such equipment. We believe, however, that*

the rapid application of IT in UK service industries, such as banking and insurance (which will lose competitiveness if they do not apply IT effectively) is so important that such liberalisation is necessary." The Government responded to pleas from a City of London eager to strengthen its position in the global capital market *vis-à-vis* its European and world-wide competitors, through far-reaching deregulation and privatisation policies. These measures were aimed at increasing competition in the domestic financial sector, increasing the size of the capital market and allowing BT to follow a more commercial business strategy and giving it access to the capital market for upgrading Britain's telecommunications infrastructure.

The winds of change were already felt in September 1979, when Sir Keith Joseph, the Secretary of State for Industry, announced a review of the public network monopoly and promised he would consider liberalising the provision of terminal equipment and dataservices. These plans were strongly opposed by the public sector unions. The POEU and UPW argued for a strengthening of the newly established corporation BT by allowing it to compete in the non-telephone areas. Almost a year later in July 1980, Sir Keith Joseph announced to Parliament the Government's intention of relaxing British Telecommunications monopoly. The BT would be restructured, the Post Office/Royal Mail and British Telecom (BT) would be divided into two separate public corporations and the markets for terminal equipment and value-added network services VANS would be liberalised. The Government's intentions to increase competition in UK telecommunications and improve the choice and services available to customers, were laid down in the Telecommunications Bill, published in November 1980. The sketchy liberalisation plans of the government were welcomed by the Telecommunications Users Association TUA (1980), who claimed that a maximum degree of liberalisation and deregulation would improve the choice and services available to users: *'free competition should be regarded as the norm and any monopoly powers left residing with British Telecommunications should be regarded as exceptions* (TUA 1980: 1)'. TUA argued that a monopoly should no longer be established by statute, and any monopoly should be granted under a license by the Secretary of State. TUA also suggested that the markets for terminal equipment, transmission services, value added services and maintenance should be opened up to competition as soon as possible and testing and standard setting should be carried out independently.

With respect to the liberalisation of value added services the Government had commissioned Prof. Beesley to undertake a study into the economic implications of allowing complete freedom to offer services to third parties over BT's network. In January 1981 Mr. Beesley (1981a) reported to the Secretary of State for Industry that the liberalisation of the use of the national public network would actively stimulate innovation and expansion in the market for value-added network services VANS. If the resale of BT's capacity by its customers were to be allowed, benefits would most likely outweigh the projected loss of revenue by BT. Competition based on reselling BT's leased circuits would facilitate new entries and fairness in the market place and force BT to bring its prices closer to costs. Beesley argued that there should be no restrictions on the freedom of suppliers to use BT's infrastructure in providing telecommunications services to third parties at a flat rate. As a compensation for its

losses, BT should be free to engage in competition in the non-voice markets via a separately accounting subsidiary to compete with these VANS suppliers. BT (1981) was vehemently against Beesley's suggestion to resell capacity, because of the foreseen losses of net revenue which would result from tariff rebalancing and cream skimming (traffic diverted to the leased lines). In the end this would trouble BT's financial position, hampering its investments and capacity to cross-subsidise services. BT, defending the long standing monopoly tradition of economies of scale, universal supply and uniform tariffing, suggested a modest liberalisation measure, limited to true value-added services and excluding the resale of leased lines. BT argued that it needed more time to prepare itself for market competition, that the immediate implementation of the liberalisation of network capacity, as suggested by Beesley. BT stated that it needed at least five years to modernise its network and to adapt its tariff structures and quality of service to the changing market environment.

The resulting British Telecommunications Act, receiving Royal Assent in October 1981, formalised the divestiture between the telephone services from the postal services by establishing British Telecom as a public corporation separate from the Post Office. The statutory monopoly was replaced by an *exclusive privilege* for BT to run the UK network. The Secretary of State for Industry was required by the terms of the Act to consult with BT before licensing any new entrant. The 1981 Act granted the government powers to license competitors in the provision of telecommunications facilities. The government announced that three licenses for operating and exploiting a public network would be issued: two nation-wide licenses to British Telecom and Mercury Communications and one local franchise to the City of Kingston upon Hull. The right to compete with BT in the market of long-distance services was given to the Mercury-consortium, that was granted in February 1982 a license under the 1981 Act to build and to operate an alternative high-capacity trunk network parallel to BT's network, linking the major cities and business centres in the UK. This license was extended in July 1983 to cover the provision of international private circuits and finally in November 1984 the company received a full PTO license under the new 1984 Act. BT's sought to pre-empt Mercury's plans for an alternative network by sharply reducing its tariffs for long distance calls between major cities. Through the creation of a competitor to BT, the government intended to reform BT and make it more efficient and answerable to customers. In the words of the Secretary of State for Industry Mr. Joseph: *'I invented the mouse to make the elephant dance - not to enhance consumer choice by getting more animals in the ring'* (quoted in Bradley 1992: 27). Another reason of the government for developing an effective duopoly was to forestall the potential powers of the unions by having an alternative network in case of an all-out strike (Harper 1995). The Thatcher government decided to license BT and Mercury as exclusive providers of the basic services. The government followed a so-called duopoly policy, whereby no other fixed link operators would be licensed before 1990 other than British Telecom and Mercury.[4]

4 Such a duopoly arrangement existed already in UK broadcasting: the public broadcaster BBC was financed through license fees and the private commercial channels of the IBA/ITV system were sponsored through advertising revenues (Tunstall 1983).

The 1981 Act brought to an end BT's monopoly on terminal equipment supply, the first telephone, however, remained the prerogative of BT. Also the liberalisation of the market for value added network services was implemented by the Government. Beesley's recommendation to use the national network to provide services to third parties was not followed by the Government. The simple resale of leased circuits was regarded as too radical and was rejected. The simple usage of network capacity was restricted to internal use and when service provision to third parties contained a 'value added' component. To prevent operators of managed data services from by-passing BT's network, simple resale would not be allowed before 1989. The Government argued that BT needed sufficient time to rebalance its tariffs and to bring prices more in line with costs. Network competition was allowed: the Secretary of State was given powers to assign licenses to run telecommunications systems to (potential) competitors of BT. Furthermore the Act installed an independent structure to set standards and approve equipment, including new responsibilities in approval matters for the British Standard Institute BSI, the Secretary of State and the newly-established British Approval Board for Telecommunications BABT. The creation of this BSI/BABT regime was regarded as essential to allow private suppliers to compete effectively with BT on equal terms. In February 1982, alternative operators in basic telecommunications services, cellular radio and broadband cable networks were licensed as contenders of BT. These competing operators would have the right to link their network to BT's public network, although they had to pay access fees to compensate BT for the more onerous aspects of its license. In the 1982 White Paper (DoI 1982b) the government announced its plans to privatise BT and to reform the licensing arrangements in order to cease BT' exclusive privileges. It also proposed the establishment of a regulatory agency, to be modelled after the Office of Fair Trading, that would ensure fair competition and quality of service. This Office of Telecommunications OFTEL would have to balance the interests of service providers, customers, equipment suppliers and other stakeholders.

It was only after the Summer of 1981, that the privatisation of British Telecom (and other public utilities) was discovered as the way to increase the economic performance and customer service of these companies and to curtail public expenditures. In the mid-1970s BT-management, accustomed to its freedom of action intruded by political interference with and scrutiny of its investment plans, was confronted with the problem of financing the heavy investments required to upgrade its infrastructure and its service provision level. The Government and BT considered the possibility to raise funds outside the PSBR by giving BT direct access to the private capital market. In 1981 BT-management was allowed to finance its major investment programme through the introduction of government-backed Buzby-bonds that would raise a possible £100-200 million on the stock market. This operation, however, did not turn out to be a real success, lacking sufficient support from the Treasury and institutional investors. The Treasury still considered the alternative of seeking private sector capital as subject to tight governmental controls. Potential investors regarded the Buzby-operation as a high-risk enterprise with restricted profitability, because external borrowing would only be limited and tariffs would be kept low. The large majority of the chairmen of the nationalised industries were

demanding more money to finance their major modernisation programmes and the sums required exceeded the strict cash limits imposed by the Treasury. The Thatcher government realised that with regards to the financing of nationalised industries, some crucial decisions had to be made if public expenditure was to be controlled.

The alternative of a large scale privatisation of public utilities was considered as a rather easy solution to reduce public expenditures (not touching upon or even reducing the PSBR) and to rely upon the capital market for the financing of these industries. For BT privatisation would imply that it was to be converted into a Companies Act company and that a majority of the state assets would be sold on the stock market. In his Parliamentary Statement of July 1982 the Secretary of State for Industry vehemently promoted the government's telecommunications policy, to be based on privatisation and liberalisation: *"It's the Government's aim to promote consumer choice. Wherever possible, we want industrial and commercial decisions to be determined by the market and not by the State. We believe consumer choice and the disciplines of the market lead to more stable prices, improved efficiency and a higher quality of service.(DoI 1982b: 1)"*

The Thatcher Government argued that privatisation would also give BT access to the capital market as the way to generate the necessary funds for the modernisation and expansion of its network. While preparing the new telecommunications legislation and the floatation of BT the government seriously examined the American strategy to move from a monopoly regime towards a de-regulated market environment. The Conservatives were attracted by the organisation of US telecommunications because the American system was privately owned, one of the best in the world and clearly ahead in opening up traditionally state-dominated markets to competition. The original proposal to divest the national operator BT and the installation of OFTEL, as the industry's regulatory watchdog, were to some extent inspired by the American experiences with breaking-up the Bell-system and the FCC as an independent regulatory agency. The creation of Mercury as a specialised carrier allowed to provide discount services to large business customers in competition with the common carrier BT, echoed the creation of MCI in 1969, that since then had effectively challenged the AT&T hegemony.

The original suggestion to divest BT was withdrawn by the Thatcher government, partly because of the strong pleas of BT's management and its unions to keep the privatised company integrated. The Government had become convinced about the political and financial risks of a break-up of BT and decided to preserve BT as a single unit (Wood 1994). A far-reaching reform of the industry by a divestiture of BT would complicate the whole operation of de-nationalising BT, confronting the Government with the problem of finding buyers for BT's unprofitable parts and reducing the proceeds of the sale substantially. In order to make a speedy floatation possible, however, the government relied upon the support of BT-management and financial investors (Kay 1984; Vickers and Yarrow 1986; Hawkings 1986). For that purpose BT's figures and balance sheet were given a special treatment: accounting procedures were restated, asset lives shortened, depreciation schemes revised and cost structures reallocated. The attitude of BT Management to privatisation was

conditionally supportive: it wanted to keep the corporation integrated, allowed to expand into new markets and it preferred a business environment that would only be moderately liberalised and regulated. BT's Corporate Affairs Department successfully lobbied in Standing Committees, Commons and Department of Trade and Industry to persuade decision makers to abandon organisational divestiture and maintain BT as an integrated unit (Newman 1986). In its claim for remaining integrated, BT Management was supported by the unions association BTUC (1983a), that had commissioned a study of the US experiences with breaking up AT&T. The unions' investigation illuminated that the American strategy was not applicable in the UK. The US deregulation policies had their origins in idiosyncratic jurisprudence and unique anti-trust legislation and BT was at that time in a significantly weaker position than AT&T to cope effectively with increasing competition. A probable divestiture would also diminish BT's ability to compete in world markets. In other words, Britain, facing a liberalising home market, needed a large company that could successfully defend it against foreign competitors.

The Labour party, supported by the telecommunications unions, strongly opposed the neo-liberal policy measures of the Thatcher government. Their belief in the invisible hand of the market that would eventually would make Britain better off, was rather poor. Just like the Tory approach of abolishing the public monopoly, the Labour party and the unions also followed a straightforward strategy by proposing to maintain or restore the state-owned monopoly of BT on the basis of social fairness, national safety, industrial/economic policy and efficiency concerns. The decision to privatise BT at first caused an enormous upheaval among the BT workforce and its unions, leading to one of the most widespread campaigns against the privatisation programme of the Conservative government. A majority of BT's employees was involved in the industrial action campaign of 1982/83 ('Day of Action') to oppose the privatisation proposals and the permission given to Mercury to interconnect its future networks with the BT-system. The unions, organised in the BTUC (1983b; 1984), declared that 'selling a public service for private profit' like in the BT-case would have the following major consequences:

- socially desirable but uneconomic services provided by BT were threatened; this would lead to an increase of the telephone charges and the quality of service for residential subscribers and small businesses in general, but for the poor, elderly, disabled and rural users in particular;
- working conditions within BT would deteriorate and probably lead to huge job losses;

BT's 'buy British'-policy would be abandoned, putting domestic suppliers and jobs at risk.

The action campaign of the unions in 1982/83, however, proved rather ineffective. The biggest union NCU was almost destroyed financially by the consequences of the engineers strike, industrial relations within BT became more confrontational and the re-elected Thatcher government went ahead with the preparations for floating BT. The original goal, set by the Labour party and the Unions to delay the 1981/82

legislation to be passed before the first term of office of the Thatcher government ended, was accomplished. In its 1983 Manifesto the Labour party vehemently went against the free market-policies in the telecommunications domain, proposed by the Thatcher government, and suggested a prolongation of a publicly-owned infrastructure. Such a national broadband system under firm public control could be accomplished by the integration of cable and the telecommunications networks of BT and Mercury. The Unions and the Labour party, however, could not counteract the privatisation and liberalisation proposals of the Tory government *per se*. A clear election victory for the Thatcher government in 1983 led to a re-introduction of the 1981 Bill to Parliament and after the Telecommunications Bill was passed in December 1983, the campaign to oppose the reform of UK telecommunications, was phased out.

Although some of the criticisms launched by the unions were incorporated, the contents of the 1981 Bill had not been amended substantially. The explicit incorporation of consumer interest in the new institutional structure was one of the minor successes of the unions campaign. Originally in the 1981 Bill, the Government had proposed to abolish the consumer's watchdog POUNC without an alternative to further and protect consumer interests. In the second 1983 Bill, however, the government recognised the notion of consumer concern and proposed to replace the POUNC-body by OFTEL, that was supposed to oversee and regulate the industry. After the decisions to privatise BT and to float it as an integrated unit were taken, the unions targeted their industrial actions against the envisaged duopoly and the projected parallel network of Mercury. They argued that Mercury would take profitable activities away from BT and this would jeopardise the public service character of telecommunications and threaten job security. In September 1983 the unions refused to allow Mercury to interconnect with the BT-network. Mercury brought an injunction against the POEU, that an action like this was against the law. The union's refusal to interconnect fell away, when Mercury was vindicated in its claim by the High Court's ruling of November 1983. In the face of a legal attack for further damages and legal costs the POEU had to comply with the ruling on interconnection (Moon *et al* 1986).

In October 1982 Professor Littlechild was asked to study and evaluate proposals to regulate BT's profitability and the liberalised telecommunications sector. The regulatory regime to be implemented had to meet the following criteria: to prevent BT from abusing its dominant position, to minimise the regulatory burden, to provide incentives for efficiency and innovation, to ensure the maximisation of net proceeds from the sale and to facilitate a successful operation of BT as a commercial enterprise after floatation. In his Report, published in February 1983, Littlechild (1983) investigated five regulatory alternatives: 1) no explicit regulatory constraints; 2) the maximum rate of return scheme; 3) the output related profits levy option; 4) profit ceiling regulation; and 5) the local tariff reduction scheme. After evaluating and comparing the various alternatives (see table), Littlechild expressed a clear preference for the local tariff reduction scheme, that would both protect domestic and small business customers and encourage new entry and competition. In other words, BT should be regulated by a system of price control in which BT's tariff's increases

were pinned down below the inflation rate. The government accepted the Littlechild recommendation for price-cap regulation and incorporated it in the new regulatory framework.

Table 4.1: **Final Rankings of schemes for regulating BT's profitability**	*No explicit constraints on profits, prices or rates of return*	*Maximum Rate of Return Regulation*	*Output Related Profits Levy*	*Profit ceiling*	*Local tariff reduction (RPI-X per cent formula)*
Protection against monopoly	5 (none)	3 (minimal controls)	2 (adequate)	4 (some controls)	1 (guaranteed)
Efficiency and innovation	1 (sufficient)	4 (poor, overcapitalisation)	4 (uncertain)	3 (little)	1 (encouraging)
Burden of regulation	1 (insignificant)	5 (heavy burden, capture)	4 (burdensome)	3 (high regulatory costs)	2 (minor)
Promotion of competition	1 (new entry)	5 (lack of incentives)	4 (detrimental)	2 (adequate)	2 (adequate)
Proceeds and Prospects	1 (good)	4 (discouraging)	5 (uncertain)	3 (appropriate)	1 (good)

Source: Littlechild 1983

After the 1983 election, the government re-introduced a slightly similar Telecommunications Bill, herewith reaffirming its commitment to the liberalisation and privatisation of telecommunications in Britain. The Secretary of State for Information Technology, Sir Kenneth Baker, confirmed that by the end of 1984 BT's monopoly of supply and maintenance of the prime telephone set would end. The Secretary of State for Industry would be given the power to transfer all property rights and liabilities of British Telecom to a future privatised company; he would also become the ultimate licensing authority for telecommunications activities. With the new Telecommunications Act, finally receiving Royal Assent in April 1984, a new regulatory structure was set up, BT's exclusive privilege to run telecommunications systems was abolished and the privatisation of British Telecom was prepared. In the 1984 Act a regulatory framework was established based on a system of licenses for all telecommunications operators. BT was placed on equal footing with its potential competitors in having to obtain a number of licenses for each of its operations, granted by the Secretary of State for Industry. The most important was the 25-year master license, that came into effect in June 1984, to run a public telecommunications system. BT had some obligations under the license, like the provision of universal service (i.e. rural areas), call boxes, emergency services as well as services to the disadvantaged and to give rebates to low users. Four other conditions of the license were important: the Littlechild formula for price control, the terms of interconnection with other domestic networks, the structural and financial separation of BT's equipment and network activities and the definition of BT's novel potential for diversification. Through the 1984 Act BT was transferred to the private sector as a public limited company and consequently 50,2 per cent of its shares were sold.

A renewable 25-year license was also given to Mercury to install and operate an alternative national telecommunications system. Mercury did not have to fulfil any universal service obligations, it was free to provide all types of fixed link services. BT and Mercury would have a duopoly to provide basic national and international services and decided not to license other network operators until 1990. The protection of BT and Mercury was limited to the core telephone services and the

provision of existing data-services on the BT network and would last until 1990. The principal reason behind this duopoly policy was to protect the revenue base of BT and Mercury in particular from the potential competition that was emerging from third service operators (cable and VAN-operators). Originally the Mercury-consortium consisted of Cable & Wireless (C&W), British Petroleum (both 40 per cent) and Barclays Bank (20 per cent): the first provided the engineering capabilities, the second project management expertise and the third financial expertise. After the management buy out of 1984, Mercury became a 100 per cent subsidiary of C&W. After its launch in the City of London in April 1983, Mercury decided to concentrate almost exclusively on the provision of long-distance communications with special services to corporate clients between the large business centres of the UK. Mercury's license also permitted it to interconnect with the British Telecom network and enter the profitable market for international services. In 1987 Mercury was allowed to provide a public call box service in competition with BT.

Instigated by the fact that public and political support for the privatisation of BT was shaky in June 1983, the Thatcher Government attempted to persuade potential financial investors by making BT attractive as a solid and highly profitable investment that certainly would give value for money (De Zoete & Bevan 1984; Scrimgeour Kemp-Gee & Co. 1984). BT was entrusted with considerable funds for new ventures and acquisitions and given sufficient time to build up an enterprise culture, improve its efficiency, upgrade its network and to experiment with a new regulatory regime. The government had insisted upon a light regulatory rein (with price-cap regulation instead of profit regulation) and a transitional period of modest competition from small operators and service providers; simple resale of private circuits was not allowed. Even before privatisation BT-management committed itself to increasing internal efficiency by reducing manpower levels with a reduction scheme of 5,000 per annum from 1983 onwards. Probably the most successful instrument in turning the privatisation into a political success has been the 'sweetener' of underpricing: a low share price would certainly persuade sceptical financial investors from the City to participate in the programme and maximise the number of shareholders in privatised businesses (Hawkings 1986). As a consequence, the floatation turned was a success: the largest share issue at that time raised almost £4b, increasing the number of shareholders to 2.3m shareholders in 1984 (the number of shareholders fell to 1.3m in 1988). On the day of the floatation, the value of these underpriced shares went up by 85 per cent, offering the new shareholders substantial windfall profits. Although the unions were against share ownership of BT-employees, the large majority of BT's workforce has become a shareholder in the company: 96 per cent accepted the free share offer, about 80 per cent bought a matching share offer and a third participated into a company share-shave scheme (Smith & Terry 1993).

Until very recently the Labour party and the Unions have argued for restoring the public monopoly on telecommunications (Labour Party 1983; POEU 1985; STE 1986; NCU 1985). They supported the return of BT to public ownership with defined social obligations for the national infrastructure and the re-location of BT and the Post Office into one publicly owned corporation. Labour and the Unions argued

furthermore for the simultaneous incorporation of the 'cream skimmer' Mercury into BT (for some leftist factions re-nationalisation of British telecommunications even included Mercury's parent Cable & Wireless). Re-establishing public ownership could be accomplished by transforming the existing BT-shares into non-voting shares and buying them back at the original issue price and purchasing sufficient shares to give the government a majority. Labour and the Unions argued that re-nationalisation would ensure public telecommunications services and facilitate a broad national strategy to construct one national broadband network. The availability of a national champion in the communications industry would enable the government to achieve particular industrial policy objectives (e.g. technology policy, employment, training and education).

Realising the rather one-sidedness of their alternative and given the fact that they had already spent more than a decade in opposition, Labour's stand on telecommunications policy has became more modest and differentiated. Nowadays the unions have decided upon a more pragmatic line towards share ownership, profit-sharing schemes for personnel and redundancy settlements. They have narrowed their focus, concentrating on representing the interests of workers and ordinary consumers by raising issues like job protection, training, universal service, and improving regulation. Today also Labour recognises -although rather vaguely- the market mechanism as the dominant force in the allocation of economic activities and it supports (a certain level of) competition in the telecommunications markets (notably peripheral equipment and value-added services). A set of provocative proposals launched by Garnham (1990) in a discussion paper published by Labour's Fabian Society, aimed at reorganising UK telecommunications in a different way, went largely unnoticed. Garnham recommended the restructuring of network operation in the UK by creating 10 regional operating companies with a monopoly of local cable operation and separate customer service delivery from network provision; the remainder of BT would be free to operate at a global level. Garnham furthermore suggested that the encouragement of Personal Communications Networks might stimulate competition in local telephony and suggested revising the regulatory regime by setting rigorous limits to rental charges and connection and by setting a number of targets (like an increase in the rate of penetration and the spread of new services), which the licensees had to meet (target regulation). Within Labour's ranks it has also been suggested that the UK network should be physically re-unified and placed under the control of a reduced BT (Harper 1993). In this new setting BT would shed all its customer retail functions and become a regulated wholesaler of network capacity.

From Managed to Open Competition ?

In November 1990, after the 7-year commitment of the government not to license other fixed-link operators than BT and Mercury, the government officially started with the Duopoly Review through the publication of the Consultative Document

(DTI 1990).[5] The Government was inclined to terminate the duopoly policy and to encourage comments and recommendations on the shift from managed competition to open competition. This so-called 'Green Paper' suggested opening up markets further by licensing more players: class licenses for self-provided circuits and two-way satellite services would be granted to new operators and mobile operators would be allowed to run fixed telecommunications services.[6] The Government adopted a position of technological neutrality, arguing that *'each technological solution should compete for its place in the market against all others (DTI 1990: 23)'* However, in order to make the policy of extending competition effective, the government had to prevent BT (and to some extent Mercury) from taking advantage of its market hegemony. Therefore the government suggested not to allow the designated public operators to provide mobile or cable services. The application of this so-called 'asymmetry rule' effectively prevented BT and Mercury/C&W from entering the Personal Communications Networks and home entertainment services market for a 10-year period, while at the same time allowing new entrants to establish themselves in these market segments. The Government was furthermore inclined to consider applications for new licenses to provide a full range of international telecommunications services. The government also consulted the major stakeholders on specific policy issues, like number portability, volume discounts to certain customers by BT, increasing transparency and disclosure of financial information by the regulated industries.

OFTEL (1991a) endorsed the broad outlines of the 1990 Green Paper, seeing them as further moves from an administered and regulated market towards more general and effective competition. With respect to the promotion of international communications the position of OFTEL (1991a) was complicated and its recommendation contingent on the liberalisation strategies of other countries. It

5 In a provocative consultancy report preceding the Duopoly Review, Ellison (1990) presented various ways to improve new market entry, to install a level playing field and to end cross-subsidy schemes in order to enable effective competition. One alternative to promote market transparency suggested by the report was to separate BT (and Mercury) into different businesses: a system company installing and operating the public network and a retailing company that would function as an intermediary between the system company and the end users. These retailing companies could be organised on a regional or a functional basis and either be associated with BT or Mercury or operate autonomously from these incumbents. Other suggestions to improve the level of competition in UK telecommunications included the following: to increase the obligations in Mercury's license to provide effective national coverage, to reduce BT's shareholding in mobile communications (i.e. disposing of Cellnet and other cellular interests), to divest BT of its highly profitable international operations, the removal of restrictions on voice telephony for local cable companies and the liberalisation of long-distance service provision (cf. Beesley & Laidlaw 1989).

6 The recommendations of the Green Paper were strongly influenced by a report of the Communications Steering Group (1988). This Group was established in 1987 by the Secretary of State and Industry to identify and analyse policy alternatives for possible developments in the UK's communications infrastructure over the next 15 years. Instead of a national optical fibre grid policy, the Group suggested that further delivery systems for the provision of interactive broadband services should be licensed: alternative telecommunications networks, cable systems, cellular networks, satellite links etc. Although admitting that fibre would play an important role in the future and boost the domestic electronics industry, a national grid policy would not be acceptable and feasible. Given the requirements of such a national fibre strategy for government intervention, large investments in a single technology, and restricted competition and choice, the position of the Communications Steering Group (1988) was clear: *'the UK would not be putting all its eggs in one basket' (22),* and *'it is preferable for the market rather than regulators to decide '(31).*

supported the need to keep competition in the provision of international services restricted, because a go-alone free trade strategy would be detrimental to UK interests, provided that other states would not follow.

BT's reaction to the government's intention to abandon the duopoly and to increase competition was ambiguous (BT 1990). BT responded positively to the notion of more domestic competition by having no objections to the liberalisation of private circuits, national fixed link services, datacasting and satellite communications. BT fully disagreed with the asymmetry rules, as proposed by the government, excluding it from entering promising markets in order to protect new entrants from BT's dominant position. The involvement of BT and Mercury in cellular and telepoint services was restricted to offer these services only through autonomous subsidiaries. Furthermore, the Government barred BT and Mercury from providing entertainment services, while CATV companies were given local monopolies in the provision of cable television and were at the same time allowed to offer telecommunications services. According to BT, the creation of a genuinely competitive regime in UK telecommunications also meant, allowing BT to participate in promising markets and technologies like broadband cable and radio: *"We therefore welcome further competition, but in an open market in which BT is allowed to compete on an equal basis with other companies. BT, naturally, accepts appropriate competition law rules governing market dominance; but the present regulatory rules go beyond that in a way that restricts BT's ability to respond to market needs in a commercial way BT."*(BT 1990: 1)

BT suggested that asymmetric regulation between BT/Mercury and the cable companies could be removed by the end of 1993. A three year protection period would be adequate, taking into account that these cable companies collaborated closely with large US cable & telecommunications companies. While foreign telephone companies like US West, Bell South, Nynex, Bell Canada, Singapore Telecom were acquiring large stakes in British cable companies, BT was still excluded from the provision of entertainment and radio-based services and furthermore subject to universal service obligations (from which all the other national and foreign operators active in the domestic market were exempt). With respect to the reform proposals for international services, BT (1991c) fully accepted the need to reduce international call charges, but was very concerned about opening up the UK market unilaterally. Except in reciprocal circumstances, BT had strong reservations about unrestricted international competition, because this would not only damage the domestic activities and overseas aspirations of BT and Mercury, but also have a negative influence upon the balance of payments.

Mercury (1991) supported the broad outlines of the government's Green Paper to promote overall competition in the UK telecommunications market. It underlined the government's suggestion to encourage the establishment of alternative local networks by removing the restrictions on cable operators to provide voice telephony (albeit in collaboration with BT or Mercury). With respect to trunk services Mercury welcomed a modest increase of competition: it suggested that new carriers should be examined very carefully before being granted a license to offer long distance services. Mercury agreed with the government on a general distinction to be made in telecommunications

regulation between dominant and non-dominant operators: the former would be prevented from providing radio-based and cable services and the latter would have the freedom to select and exploit the most profitable market segments like fixed or radio-based services. Mercury, however, fully disagreed with the government's consideration to classify both BT and Mercury as dominant operators and treat them in the same regulatory way. For Mercury the term 'dominant operator' applied exclusively to BT; 'non-dominant operator' referred to all the present and future operators, including Mercury, that were seeking to challenge BT's powerful position. Mercury argued that like any other non-dominant operator, it should be allowed to provide radio-based services by itself and construct a local network for the conveyance of both entertainment and telecommunications services. Like BT, Mercury was highly suspicious of the government's suggestion to license new operators in the provision of international services. Mercury believed that the existing level of competition in the international market was more than sufficient. A unilateral liberalisation of international communications could severely damage Mercury's economic position when foreign-based operators were allowed to take advantage of the open UK market, without British operators being accorded equivalent treatment in their home countries (Mercury 1991).

The user community, organised in the TMA (large business customers) and the TUA (residential users and SMEs), supported the government proposals, as laid down in the 1990 Green Paper, to license additional local services and to remove all restrictions on satellite services, cable systems carrying telephony, and self-provided private circuits. The TMA (1991: 9), representing large business users, expressed its positive support for the government to open the telecommunications market to new entrants, arguing that *'further competition is needed to achieve the objective of ensuring that users' needs are met by a wide range of services at prices that do not leave room for inefficiencies or excessive profits.'* While supporting the government's suggestion to lift the ban on mobile operators to provide fixed services, TMA went further by arguing for the removal of restrictions on the provision of mobile service providers by fixed service operators. TMA advocated the promotion of further competition in international services and suggested that BT should be allowed to offer selective volume discounts to large customers. To facilitate effective competition, TMA suggested that certain regulatory conditions had to be met, like the sharing of ducts and civil engineering infrastructures, ensuring equal access to all trunk networks and full interconnectivity between all the networks, establishing network independent numbering, and adjusting the established regulatory framework (reviewing the price-control formulae, advancing more effective quality controls, encouraging greater disclosure of strategic information by the incumbent etc.).

TUA (1990; 1991) argued that the duopoly policy did not go far enough and had failed to bring effective competition in the market place. BT still had a virtual monopoly on the local loop and Mercury was not seeking national competition with BT and building up a large customer base, but looked for profitable niche markets in the urban business and professional domains. Although it did not rule out the possibility of establishing competition through the licensing of a third national operator, TUA preferred the active encouragement of entry into local loop provision.

Regional fixed and mobile operators would use new and more cost-effective technologies, like cable-tv, microwave, satellite links, which would be attractive to business users as a complementary or alternative infrastructure for both national and international services. In its regulatory demands, TUA drew attention to the promotion and the guarantee of equal access between network providers and the introduction of flexible pricing formula, that would allow for a choice between higher rental and lower call charges, and lower rental and higher call charges packages..

Although they made some critical sidemarks with respect to policy issues like price regulation, users' representation, and accessibility and penetration of the telephone service, the consumer organisations supported the overall thrust of the Government's Consultative Document. Both the Consumer Association CA (1991) and the National Consumer Council NCC (1991) argued that the extension of competition in telecommunications was in the interest of residential consumer because choice possibilities would increase and prices would be significantly lower. The introduction of competition gave consumers clear benefits with regards to the supply of peripheral equipment, value-added services, trunk and international calls. Only in the domain of local telephony that effective competition between the incumbent BT and Mercury as contender was not achieved. The CA and NCC generally speaking agreed with the Government's principle of technological neutrality and its consequent intention to liberalise the 'local loop' by introducing competition between the fixed infrastructure and radio technologies. With respect to the proposed exclusion of BT from cable provision, the NCC (1991) was against, because this would hinder BT from realising economies of scale and scope and frustrate an effective diffusion of broadband services.

While establishing effective competition, strong regulatory measures were still required to protect the interests of residential consumers *vis-à-vis* dominant suppliers and business users. The NCC suggested strengthening price controls on connection charges, rentals, local calls and enquiries and proposed an additional 'price cap' regime for modest users. Also measures were needed to make the regulatory regime more transparent and accountable; for instance by arguing for more openness in the regulatory regime and for a fuller disclosure of information by the regulated parties. The two consumer organisations stated furthermore that the representation of (residential) consumers in the UK telecommunications framework needed to be strengthened. The OFTEL-body intended to combine the role of regulating the industry with that of representing the interests of consumers. The CA (1991) and the NCC (1991) made it clear that a regulatory body and a consumer representation agency were not identical and argued for setting up a properly equipped national telecommunications consumer council, that would act (semi-)independently from OFTEL. This separately organised consumers' structure would be in charge of consumer advocacy and general policy representation of consumers' views. CA and NCC suggested that OFTEL and such an envisaged consumer representative body should jointly monitor the reliability of the public telecommunications network and quality of service provision. Given the fact that the telephone penetration rates in the UK were still lagging behind countries like the USA and France, these two bodies

should be involved together in setting clear targets to promote the accessibility to the telephone service and to foster an increase of its penetration in the UK.

The telecommunications unions, organised in the BTUC (1990; 1991), expressed a rather critical opinion about the Green Paper and the following White Paper. BTUC argued for a better balance between the interest of British companies, large users and average consumers. It set forth three objectives for telecommunications policy in the 1990s that were insufficiently met in the Duopoly Review: securing high quality telecommunications for the maximum number of people at the lowest cost, proving the best infrastructure for British business and ensuring the economic success of British telecommunications. To start with the latter, BTUC criticised the neglect of the interests of the established British telecommunications companies in the national and international economy. A further evolution of liberalisation, implying cream skimming and multi-network operation, would pose a serious blow to established industrial framework. The increase of network competition, the entry of new specialised operators, a possible divestiture of BT and tightening regulatory constraints, would especially harm the financial position of BT, its network and quality of service. This free-for-all competition would challenge the profitability of the fibre optic networks of both BT and C&W/Mercury and would instigate a shift in these companies to short-term commercial returns and hereby sacrifice the longer-term goals of infrastructure modernisation, training, R&D and quality of service levels. Therefore BTUC asked to secure the threatened position of BT by giving it more freedom to enter the cable market and more pricing flexibility (allowing bulk discounts) and -in general- for more caution in the liberalisation process.

The level of competition in UK telecommunications, especially when compared to the European Community, was regarded by the Unions as sufficient. So no further licenses for fixed networks were required: BT's single national grid would secure that the universal service and social obligations would be met. Another related element of criticism referred to the underestimation of the rapid globalisation of the telecommunications industry and its consequences for the key British companies. BTUC stated that the government willingly or unwillingly promoted the interests of major foreign companies at the expense of British business. BT and Mercury/C&W were prevented from entering the markets of PCN and home entertainment services for a fixed period while new entrants were given the opportunity to establish themselves in the local communications market (the majority of them was closely linked to US-based companies). BTUC suggested that the government needed to further both the national and international interests of British business. This could be achieved by abolishing the asymmetry-rule in the cable and mobile markets and demanding reciprocity of market access at the international level. BTUC also observed deficiencies in the existing regulatory structure and in OFTEL's functioning, lacking sufficient accountability to Parliament, the Department of Trade and Industry and the general public. BTUC criticised OFTEL's narrow interpretation of its orbit by giving clear priority to the promotion of competition over the representation of consumer interests. The Association of the Electronics, Telecommunications and Business Equipment Industries (EEA) largely spelled out the same arguments in support of the status quo as BT and the unions, organised in the BTUC. Endorsing the main outlines of the Green

Paper, the EEA (1991) argued that the position of both BT and Mercury/C&W needed to be protected and strengthened. Consequently, it suggested that duopoly on long-distance services should be maintained for at least another five years. The duopolists should be able to introduce and exploit two-way broadband facilities.

The following White Paper, published five months later in March 1991, contained some of the resolutions of the government and the DGT in the light of the observations from the various stakeholders in the telecommunications domain (DTI 1991). It suggested a termination of the duopoly policy in favour of a competitive market environment, in which only minimal restrictions were imposed. This regime shift from managed competition to open competition would increase consumer choice, promote free enterprise and bring down prices. The White Paper suggested the opening up of the telecommunications market for new entrants (public utilities, railways) and supporting the progressive introduction of equal access and a further streamlining of the interconnection between the various networks. On the issue of the new entry into international service provision, the Government reversed its position from that put forward in the 1990 Green Paper. Despite its intention to terminate BT's and Mercury's exclusive rights in international services, the Government turned susceptible to the risk of following a go-alone strategy of free-for-all competition in the still strongly cartelised market for international communications. Instead the Government followed a different path: it decided not to issue new licenses in the short term and to put a regulatory restraint on BT's market power in international communications. From 1991 onwards, international services would be included in the price control agreements. The government proposed to facilitate competition between the telecommunications and the cable infrastructures. In other words: cable operators were allowed to provide voice telephony without interference from BT or Mercury to interconnect their systems. In the new situation BT and Mercury were prohibited to provide entertainment services in their own right for at least ten years. Furthermore mobile operators were allowed to operate fixed telecommunications services using their radio networks. The Government, however, maintained the restriction on fixed operators from providing mobile or multi-point services under their main licenses. The proposals of the White Paper were finalised in September 1991.

After the adoption of the 1991 White Paper, the British telecommunications industry moved away from managed competition through a duopoly structure with restricted entry to an open market environment under detailed regulatory oversight. Officially there were no limits to the level of domestic competition: anyone with sufficient resources could at any time apply with a fair chance of success for a restricted number of licenses. After 1991 BT could expect increasing competition in the local loop from cable operators and PCN-operators in the long-distance market from public utilities, British Rail, and other new operators. However, fair competition has not yet been achieved: the established duopoly carriers (notably BT, Mercury, Cellnet, Vodafone) still have a major advantage over new entrants in terms of entry costs, economies of scale and socio-political goodwill. To create a more open and dynamic environment in the cable and PCN markets the traditional duopoly structure has been replaced by a temporary regime that combines free access to new entrants and a prohibition to enter for the established carriers. These new markets are administered through the

manipulation of entry barriers and a-symmetric regulation between the established parties and the new entrants. Although there is a clear difference with the past, the new regulatory system could still be regarded as an additional version to the duopoly, in which the administered protection of the former new market players that were allowed to establish themselves, is replaced by the protection of a new generation of operators from the previous generation of grown-up or already established players. By keeping these dominant and newly established parties out of particular markets or handicapping them temporarily, it is hoped that overall competition will be actively promoted. This advantage given to the CATV companies has led Mercury to abandon the local market altogether and BT's telephone charges initially being undercut by the new entrants.

In May 1994 the Major Government announced in a consultative document that new and high capacity computer and telecommunications infrastructures would be utilised in improving and developing digital-based public services (CCTA 1994). Examples of applications with a widespread coverage to be distributed over these *information superhighways* could include electronic messaging between government agencies and citizens, information access, electronic trading, tele-reservation, distance learning etc. In a follow-up policy document, published in November 1994, the DTI (1994) argued that the UK needed a more coherent policy on national broadband infrastructure and to develop new ways of undertaking public business and providing services to customers (e.g. linking hospitals and other public institutions with each other). The 1991 framework, that banned BT from using its network to carry entertainment services, would not be touched upon by the late 1990s. The government did consider, however, a progressive lifting of the ban over an eight year period on the ground that otherwise the UK would lag behind the US and Japan in the development of interactive superhighway services. An appropriate institutional structure would be set up in the Department of Trade and Industry to prepare Britain for multimedia and broadband communications, including the appointment of an Under Secretary for Trade, the creation of a new multi-media unit in the Telecom Division of the DTI, and the installation of a Consultative Committee of senior-industrialists.

4.6 *The Liberalisation of the UK Telecommunications Market*

The years between 1981 and 1994 saw a progressive liberalisation of the various telecommunications markets. At that time the UK was still the only country in Europe without a state monopoly on basic transport services, but instead a duopoly shared between BT and Mercury. The markets for terminal equipment and value-added network services were almost fully liberalised with hardly any entry barriers. Since 1981 the provision, installation and maintenance of all terminal equipment is open to competition. BT's monopoly over the supply and maintenance of the first telephone connected to the network was removed in December 1984. The 1981 Act initiated a phased liberalisation of the supply and maintenance of PABX equipment, that only became effective early 1983. In the market for PABX and key systems BT's market share has fallen from nearly 100 % to less than 50 per cent in 1990.

In 1982 Mercury received a 25-year license to run long-distance communications systems (reconfirmed under the new 1984 legislation). In 1985, Mercury had installed an operation fully digital system, made up of fibre-optic cables and microwave, linking the major cities of the UK. The establishment of a second network operator was clearly opposed by BT, based on the claim that this would imply wasteful duplication and cream-skimming of its most profitable markets. Although BT still had exclusive rights on international telecommunications and public payphones, on the network level competition between two operators, Mercury and BT, was initiated. At first Mercury was seriously impeded by the absence of any statutory right to interconnect its alternative network to the BT infrastructure. So Mercury had to rely upon bilateral negotiations with BT Management over the terms of interconnection. A provisional agreement between the two operators was reached in 1982. The BT engineers strongly opposed the item of interconnectivity and consequently refused to link Mercury to BT's public network. Mercury went to court in order to prevent the POEU continuing its industrial action against them and in November 1983 the non-collaborative action on interconnectivity from the BT engineers and the POEU, collapsed in the face of a court injunction. Finally, in 1985, Mercury received OFTEL's support on its claim for full access to the BT-network through OFTEL's determination (OFTEL (1985b). This decision was aimed at stimulating the effective penetration of Mercury and had been based on the principles of 'any to any' (any customer of one network can access any customers of the other), freedom of choice ('customers free to choose in routing messages' and 'equal charges for equal access or cost-based interconnection charges'). The introduction of Mercury was also slowed down by local authorities, who supported the Labour party and the public sector unions. The City Council of Manchester, for instance, deliberately delayed the decision to give Mercury planning permission.

Mercury effectively successfully developed into new businesses: in 1987 it was allowed to launch international services (relying upon the overseas links of its parent C&W), public call box services, followed suit by a PCN license (in partnership with US West) in 1989. Although BT's overall presence in the domestic telephone market is still dominant (about 90 per cent), Mercury has become successful in the business market. It has concentrated its marketing efforts on the most lucrative markets in and around the City of London, where it has gained a substantial market share of more than 25 per cent. Mercury had a troublesome start, however, as it was confronted with the sitting powers and lack of cooperation from BT Management. For example, before the standard setting institutions BABT/BSI were effectively institutionalised, type approval and testing remained BT's prerogative for a transitional period. This led to strong complaints of selective treatment and abuse of power by BT: rival suppliers were confronted with lengthy and excessive delays in the testing and approval of their equipment.

The market for value added networks was opened in 1982 when the Department of Trade and Industry issued a General License for VANS and a license for group use of leased lines and the running of closed-user networks (the Branch System General License), followed by a new 12 year-year class license for value-added and data services (the VADS-license) in 1987. The Department of Trade and Industry licensed

several hundred private suppliers, that started to provide a wide range of specialised tele-services like videotex, electronic mail, teleconferencing and various retrieval systems. With respect to the commercial diffusion of videotex services the results were somewhat disappointing. Although BT had originally developed videotex in its research laboratories, it was unable to exploit the comparative advantages of its patented Prestel system. In 1978/79, BT introduced its system with the objective to establish an electronic information industry in Britain and have its Prestel system accepted as a world standard. The second goal was achieved and the first became only partly realised a decade later after targeting the wrong groups, management failures and competition from other service providers. Initially BT attempted to commercialise its videotex system by keeping exclusive control over the transmission and handling of information (i.e. a closed system of centralised databases and no gateways to privately owned computers). In order to make the videotex service operational, BT relied upon collaboration from its private partners, like terminal suppliers (TV manufacturers), broadcasting companies and information providers. Managing this collaborative venture turned out to be very complicated. After 1981, when the Thatcher government had commenced to liberalise the equipment and services market, BT reacted by redefining the Prestel-system and its target markets (Thomas 1991). The investments in Prestel were cut down and videotex was repositioned as a commercial rather than a public service. BT had also overestimated the market prospects for general tele-services by launching it unsuccessfully on the consumer market and overlooking real demand for specialised business services. The gradual growth of videotex has been achieved by linking Prestel to other systems for transaction, information and communications services in the business market, like Homelink (home banking), Micronet 800 (linking computer users), Citiservice (financial information services) and Skytrack (airline reservations).

In 1988 six licenses were issued to provide specialised satellite services: British Aerospace, BSB, Maxwell, Uplink, SIS and the US-based company EDS (a subsidiary of GM). One year later, UK government, as the first European country, allowed the simple resale of network capacity and leased lines from the designated operators in domestic telecommunications (BT, Kingston upon Hull, Mercury and the CATV companies) to third parties. The DTI issued licenses to private network operators such as British Rail, Racal, the Post Office subsidiary National Network and Istel (in 1989 acquired by AT&T) to establish virtual network services. These liberalisation measures stimulated the utilisation of BT's network by other firms to provide value-added services. The UK market for value added services and data services, already liberalised between 1984-1986, has developed into one of the largest and most dynamic in the world. After the duopoly review of 1991, additional competition has emerged in the long distance and local communications market from cable companies, utilities and other new operators, who have been licensed to provide trunk and local services. The only area in which the British government has so far not completely opened the markets to competition is the provision of international telecommunications services. So far this has remained the exclusive prerogative of BT and Mercury.

In 1991 the duopoly policy expired and the government conducted a review of its telecommunications policy. The outcome of the research was the promotion of further liberalisation in the local and trunk services. The new policy lines favoured virtually free entry to the domestic telecommunications market, including cable, satellite communications and resale of capacity. Utility companies, British Rail and Water Companies were allowed to utilise their corporate high capacity fixed networks for the provision of trunk network services. Since 1992 DTI has awarded several public telecommunications operators licenses. The electricity companies, Scottish Hydro-Electric, Scottish Power, Energis (a subsidiary of the National Grid Company NGC) and Torch Ltd (a joint venture of Yorkshire Electricity and Kingston upon Hull Communications) were licensed to provide nation-wide telecommunications services. Ionica (owned by Yorkshire Electricity and Telecom Finland) was allowed to build radio-based networks for the local loop. WorldCom International (part of the Swiss-owned TeleColumbus), National Network (reselling capacity of Royal Mail's network) and Esprit Ltd were authorised to install terrestrial or fixed telephone links throughout the UK and to provide international services over links leased from other operators. The licensing of foreign entrants, such as the US-based MFS telecommunications company, the Swedish Telia (member of Unisource), Telecom Australia and COLT (owned by the US Fidelity Management & Research Corp), further challenged the privileged position of BT and Mercury in the City market for domestic and international business information services. BT-management responded to the competitive challenge by improving efficiency, modernising its infrastructure, increasing customer care and combating customer complaints (e.g. waiting lists, repair service), and introducing price differentiation and new services (e.g. tariff cuts, *friends & family* discounts, light user schemes, usage-based charging etc.).

In its Cable Programme, launched in 1982/83, the Thatcher Government sought to expand the installation of broadband systems in order to pull through advanced tele-services and to promote the domestic cable industry (Home Office & Department of Industry 1983). The Government made clear that cable television systems and a future nation-wide broadband infrastructure, as an alternative local network to the BTnetwork, would increase the possibilities of competition in the provision of communications services and equipment. It attempted to balance free entry to private companies to develop cable systems and allowing only a restricted involvement of Mercury and BT in that market. BT and Mercury would not be given the exclusive right to run cable systems, nor would their participation in every cable company be mandatory. So cable operators were allowed to provide broadcasting and tele-services, but voice telephony and data services belonged to the exclusive responsibility of BT and Mercury. In order to protect the financial base of the two nation-wide public telecommunications operators, BT and Mercury would retain their exclusive right both to link local systems and to provide voice telephony on local cable systems. BT and Mercury were allowed to supply cable services, only through a subsidiary with a separate accounting system and in collaboration with a licensed cable company.

The Government's strategy towards cable development and the concomitant revitalisation of the electronics industry was based on a market-led approach, financed by private investment and with a minimum of government intervention. The two sponsoring ministries, the Home Office & Department of Industry (HO & DoI 1983) attempted to find a balance between free-for-all competition, deregulation and the existence of local monopolies through proposing 'regulation with a light touch', in which the licensing of cable services providers, standardisation and supervision of the industry was to be administered by a new regulatory body. This Cable Authority would be small with a well-qualified staff and act independently from the central government. It would be financed through the fees paid by license and franchise holders. The Cable Programme was finalised with the coming into force of the Cable and Broadcasting Act of 1984, that deregulated the cable sector and actually established the Cable Authority, as the body responsible for the promotion of cable, licensing, standardisation and compatibility matters and general oversight of the industry. In 1991 on the basis of the new Broadcasting Act, the Cable Authority was integrated, together with the Independent Broadcasting Authority in the newly established Independent Television Commission ITC.

Before 1990 only a small number of cable franchises were assigned to CATV-operators. Although the results of the pilot experiments were disappointing and the extent of cabling was still only limited, the Government still gave support to cable development, because it offered the prospect of rivalry between BT and Mercury as local network operators and cable operators in the near future. The decision of 1990 to permit cable companies to offer voice telephony services in a limited geographical area and the possibility that these cable networks could become interconnected to create a national or regional parallel network, was directly aimed at challenging BT's dominant position in the entire telecommunications market in the mid-term (Cornford & Gillespie 1993). From 1991 onwards, the number of cable franchises granted by OFTEL and ITC increased significantly: more than 120 CATV-companies have been licensed to provide broadcast services and telephone services. Today, North American cable and telecommunications companies, like Nynex, US West, PacTel and Telus, clearly dominate the British cable market. US and Canadian companies have shown a big interest in developing the UK cable market with domestic partners by offering local services (voice telephony and cable) and interconnecting their networks to BT and Mercury's infrastructure. When the ITC declared in the Summer of 1993 that BT did not need a special license for its interactive TV and video-on-demand trials on a point-to-point basis, major disagreement arose between the cable operators and BT over the rules for the delivery of video entertainment services over fixed links. Whether the roll-out plans of the private cable operators will exhibit an even development across the country, could be questioned. They are likely to be significantly skewed towards regions with higher business demand and wealthy residential areas (Cornford & Gillespie 1993).

In the mobile services market the Government also followed a duopoly strategy, allowing two competing players to develop a specific market exclusively and to recover the investments by prohibiting new entry for a certain period. In May 1983 two licenses for the operation and exploitation of cellular radio systems were issued

to Vodafone (owned by Racal and Millicom) and Cellnet (owned by Securicor and BT). The two licensed mobile operators were not allowed to provide value-added services or enter manufacturing and were required to operate their cellular activities at arm's length from their parent companies. Cellnet and Vodafone were granted a 25-year license to operate a cellular radio network (including GSM-provision) with full interconnection rights to the networks of BT and Mercury. The cellular market really came into effect in 1985 when the services were actually launched, followed by a fierce competition between the two systems with Vodafone now having a slightly bigger market share and revenues than Cellnet. An innovative approach was followed by the vertical separation of network provision and retailing services to the public: the two network providers can offer mobile services, like normal retailers, but only through separate subsidiaries. The competition both in retailing services and between network duopolists resulted in an intensive rivalry and a rapid market expansion (Müller & Toker 1994). The share of the network operators is about 30 per cent, while over 50 other firms make up the rest of the market. With more than 1,3 million subscribers in 1992 and cheap prices, the UK is one of the leading countries of cellular services in Europe. The paging market has been competitive since 1983: several firms, including BT, Mercury and Racal, were licensed to run nation-wide paging services. In 1989 four Telepoint licenses were issued: Ferranti, Phonepoint (Bundespost Telekom, France Télécom, BT, STC and Nynex), Callpoint (Motorola, Mercury and Shaye) and BYPS Comms (Barclays, Shell and Philips). BT was excluded from bidding directly for the licenses in paging and telepoint services. The Telepoint system, however, ran into technological and financial troubles and market penetration has so far not been a success. In 1991, three licenses for Personal Communications Networks were issued. After a consolidation phase, two groups remained and started to roll out and operate their network in 1993/1994: Microtel (Hutchison and British Aerospace), later renamed Orange, and Mercury One-2-One (C&W and US West). The expectation of PCN technology was that it would not only stimulate competition in the cellular radio market (with Cellnet and Vodafone as major rivals), but would also promote competition in the mid-term with the fixed network services, in particular the provision of the local loop to the final customer (with BT, Mercury, the cable operators as major rivals).

The equipment market in the UK was also opened up. The closed telephone *ring* of suppliers was replaced by a cross-border merger, a foreign take-over and new entrants. These far-reaching developments indicate that the British equipment manufacturing industry was in a deep crisis, in which domestic development, production and sales were more and more replaced by competitive tendering, including new entry and imports (Morgan *et al* 1989). There has always existed a large degree of mutual adjustment between BT and its preferred suppliers, but their relationships became really close when in 1977 the Post Office, GEC, Plessey and STC decided to collaborate on the development of System X. BT, irritated by the disappointing results and the many delays in the project caused by software problems, expressed its desire to reform the collaborative arrangements by transferring all the System X activities to one single company. Eventually, after STC backed out, a compromise was found in which Plessey and GEC agreed that the first

would be the leading contractor and the second the subcontractor. At the same time, BT also considered offering a part of its switching business to an international tender. In March 1985, BT finally opted out of the System X development and purchased the rivalling System Y from the new supplier Thorn Ericsson. Besides the security of delivery, the major reason behind BT's strategy of second-sourcing was to put the System X manufacturers GEC and Plessey under competitive pressure to accelerate the upgrading of the network and cut costs in order to respond effectively to Mercury's threat. GEC and Plessey argued that by choosing a second telephone switch, that would rely upon Swedish technology and components manufactured in the UK, BT abused its large buying power and thereby reduced the domestic and international market prospects for British switching technology. The decision to use System Y next to System X would, according to GEC and Plessey, clearly damage the interests of the national equipment manufacturing industry and would lead to a large number of job losses (Cawson *et al* 1990: 99/100). The regulatory body OFTEL turned susceptible both to BT's argument that second-sourcing would encourage competition and spread the risks of supply uncertainties, and to the longer-term interests of the British equipment manufacturing industry. OFTEL (1985a) suggested a compromise in which BT was not allowed to purchase the System Y for a transitional period of three years, thus giving the System X manufacturers GEC and Plessey sufficient time to adjust to a more competitive market and to redevelop their productive process. On the one hand, OFTEL to some extent acknowledged the protectionist arguments of the UK telecommunications manufacturing industry, but it was on the other hand quite critical about its longer-term health in a globalising business environment. OFTEL's recommendation to the domestic equipment manufacturers was clear: raise the exports of System X or collaborate with foreign partners.

BT's acquisition of a 51 per cent share in Mitel, the Canadian PABX manufacturer, was originally intended as a means to build a powerful presence in the North American market. BT argued that majority control of Mitel was vital to its corporate strategy of becoming a major manufacturer of telecommunications equipment. In its growing ambition to become an international vertically integrated company, BT, however, glossed over the domestic implications of the link up. In the UK market, where Mitel had a 15-20 per cent share, the deal posed a considerable threat to the established suppliers of small and medium-sized exchanges. Notably GEC and Plessey strongly opposed the BT-Mitel venture into manufacturing equipment, claiming it was a severe distortion of competition in the light of BT's dominant position in purchasing and supplying equipment and exclusively stipulating network interface standards (MMC 1986: 51-54). The Secretary of State referred the case to the Monopolies and Mergers Commission (MMC). The MMC (1986) was highly critical about BT's take-over of Mitel, referring to BT strengthening its market power and distorting competition between suppliers in the domestic PABX market. The acquisition could nevertheless be allowed, provided some restrictive conditions were met: BT and Mitel had to keep their business activities separate and the use and supply of Mitel equipment in the UK should be limited. To some extent guided by the optimistic prospects of a successful entrance of BT into the American market, the

Secretary of State decided in 1986 to endorse the MMC-recommendations and allowed the Mitel take-over on the condition that a separate subsidiary had to be created for Mitel and its share in the UK market must be limited to 25 per cent.

The process of concentration in UK telecommunications manufacturing continued in December 1985, when GEC made a bid to acquire Plessey. The envisaged merger was opposed by the MMC because it would be against the public interest and national defence interests. The MMC proved susceptible to Ministry of Defence argument, that a GEC-Plessey merger would seriously reduce competition in the supply of defence electronic equipment (Morgan *et al* 1989). In 1987, GEC and Plessey suddenly announced that they would merge their manufacturing activities to achieve the economies of scale required for international competition. This joint venture, called GEC Plessey Telecommunications GPT, was established in April 1988. Two years later, GEC, in close collaboration with Siemens, succeeded in gaining almost exclusive control over Plessey through a full take-over. Today 40 per cent of GPT is owned by Siemens. The final collaboration between GEC, Plessey and Siemens in the fields of semiconductors, defence and telecommunications equipment was the outcome of a multitude of motivations, both strategic and tactical (Morgan *et al* 1989). The first reasons for the concentration in the UK equipment market through the creation of GPT could be found in the burgeoning R&D costs of new digital switches and the required economies of scale required to compete on a global market. Secondly, the Ministry of Defence was no longer against the deal: it had become a strong advocate of the Internal European market (i.e. intra-European tendering) and with the strengthening of the position of British Aerospace domestic competition was still more than sufficient. Thirdly, the joint bid for the small internationally active niche player Plessey by the GEC and Siemens conglomerates was induced by Plessey's innovative record in the three fields listed above: Siemens expressed a clear interest in absorbing semiconductors and telecommunications, and GEC was eager to take over Plessey's defence activities. Fourthly, the Plessey take-over by GEC and Siemens would mean a pre-emptive strike to keep AT&T out of the British telecommunications equipment market. The evolution of BT's third preferred supplier STC is somehow cumbersome: STC was excluded by BT from the digital exchange market in favour of Ericsson, that was allowed to enter the market for digital public switches. In 1984 STC linked up with ICL, in 1990 it became incorporated within the merger ICL/Fujitsu and in 1991 STC was acquired by the Canadian/US manufacturer Northern Telecom NT. In the early 1990s, two Labour representatives, Harper (1993) and Garnham (1990a) have suggested that BT should seriously consider buying out the Siemens stake in GPT in order to keep up the UK's competitive advantage in the entire telecommunications industry, including both services/network provision and equipment manufacturing.

4.7 *The Privatisation of the Post Office/British Telecom*

In August 1984, BT was converted from a statutory corporation into a public limited company plc: it had to prepare its accounts in the manner prescribed for private enterprises operating under normal company law. BT was duly privatised in

November of that year: its floatation put 50,2 per cent of the corporation's shares in 'public' hands, raising b£3.9. BT's shares were highly undervalued, as the offer was 3.2 times oversubscribed. The share offer was subdivided into: 47 % sold to British financial institutions, 14 % to overseas investors, 34 % to the general public and the remaining 5 % to BT employees (Newman 1986). In addition to 49.8 % of the issued ordinary shares, the government possessed a Special 'Golden' Share and Preference Shares. Although the government did not intend to use its right as a major shareholder to intervene in the management decisions of BT, the potential influence of the government upon some aspects was nevertheless substantial. For example the rights of the Special Share allowed the government to block changes in certain Articles of the company, especially in limiting large shareholdings to 15 %, ensuring the British nationality of the CEO, the creation of new classes of voting shares and the appointment of two non-executive directors to the BT Board. It was clear that the government's golden share insulated BT from the threat of a hostile take-over (De Zoete & Bevan 1985).

The privatisation of BT put the government in a difficult position, because on the one hand it was ideologically in favour of increased competition and more efficiency in British telecommunications while on the other hand the government relying on BT for information and cooperation to ensure a successful sale of the majority of BT's shares (Veljanovski 1987). The critics argued that if BT was sold as one corporate entity the Government was simply replacing a public monopoly with a private monopoly. In 1982/83, the government put forward the plan to float BT as one entity rather than splitting it up into smaller independent units. This was an implicit recognition that BT would continue to dominate the British market for years. BT's future role lay in becoming the flagship of Britain's IT-industry. To achieve this, a strong and integrated BT was essential. In 1991, another 28.4 per cent of BT's shares were sold on the stock market, raising another b£ 5, and bringing 57.2 per cent of the shares in the hands of financial institutions and 21 per cent to the general public, including BT employees (BT Annual Review 1992). In the Summer of 1993 the privatisation process of BT was accomplished when the government's remaining share of 21,8 per cent was sold on the Stock Exchange.

Although the government still gave clear priority to its 'private' interests in BT at the expense of promoting market forces, the government nevertheless expressed some concern with regards to encouraging new entry and establish effective competition in telecommunications. For example in 1984, the Government rejected a far-reaching joint venture of BT and IBM to provide managed data services. At the basis of the refusal lay a mixture of competition policy and industrial policy: whether to see a powerful and integrated BT as a platform to develop an internationally successful electronic and IT industry or to use competition in network provision and apparatus supply to serve the interests of domestic users and the information services industry (Garnham 1985). Competing VAN operators believed that the BT-IBM alliance, called JOVE, would seriously threaten the interests of the domestic computer industry, notably ICL, by JOVE's reliance on IBM standards. The competitors feared a 'lock-in' situation that would force them to replace OSI-protocol (i.e. Open Systems Interconnection) for IBM's SNA architecture. There was also

much concern that the venture between two leading companies in the related telecommunications and computing market would surely dominate the value-added service market. After the refusal of the JOVE-venture by DTI, BT and IBM established a more moderate venture which applied successfully for a license for the provision of data network management services. The major competitor in the VAN-market ICL teamed up with GE Information Services (GEIS) in 1987 to establish INS International Network Services. Another illustration of the concern for fair trading matters can be found in the government's response to BT's acquisition of Mitel. BT's move of taking over one of its PABX-suppliers raised concern about the anti-competitive effect of the deal. After the 1986 investigation by the MMC, the Secretary of State decided to allow the merger, provided if certain conditions, preventing any extension of BT's market dominance, were met.

The restructuring of British Telecom has been directed towards stimulating its market responsiveness and economic performance. Between 1981 and 1993, BT's corporate culture successfully developed from a former state bureaucracy to a market-led, vertically integrated multi-product firm. The centralised functional form was replaced by a more decentralised divisional form, that has become closer to neatly defined geographical markets and moreover to BT's various customers groups. The organisational changes included the external recruitment of senior management, the creation of independent and financially separate divisions and a decentralisation of decision making with the establishment of independent profit centres and geographical areas. The process started in 1982 with an internal reorganisation of the company. BT was divided into four divisions: BT Inland, BT International, BT Enterprises, and Development and Procurement, headed by the British Telecom Board. In 1983 the previous Inland Division was split into the Local Communications Services (LCD) and National Networks (NN). The former was in charge of operating and exploiting the local telephone network for residential customers, while the latter was responsible for the operation and exploitation of the trunk network and the special business services. The reason for this separation was twofold: much of BT's manpower was concentrated in the Inland division and BT, challenged by competition from Mercury, was more or less forced to make a distinction between the local loop and trunk communications. The LCS-division was the major branch of BT in terms of revenues, assets and manpower (about 80 per cent of the total). Given the claims of lack of efficiency (mainly caused by outdated network equipment and overmanning), financial controls, flexibility and customer responsiveness, a further reorganisation of the LCS was regarded as necessary (Scrimgeour, Kemp-Gee & Co. 1984; De Zoete & Bevan 1984). In 1984, BT announced that its structure of 10 Regions and 61 Areas would be replaced by a new structure of 5 territorial directorates and 31 districts. At local level the old telephone areas were replaced by 27 geographical districts, that would be managed as semi-autonomous profit centres with increased decision making powers for District Managers.

In 1987, the LCS and NN divisions merged again to create the division UK Communications, operating BT's local and long-distance networks and supplying peripheral equipment. BT International BTI was in charge of operating and exploiting international communications and business systems. For BT, as one of the

largest carriers of international traffic, this branch was the most profitable and fastest growing part of the corporation. BT Enterprises BTE, set up in 1981, focused upon newly emerging markets and comprised out of the following major businesses: Consumer Products CPD, Merlin (business products & systems), Value Added Systems and Services VASS (Yellow Pages, Spectrum/Dialcom services, Prestel), Mobile Systems and Services MSS, and BT Vision (visual and broadcast services). The Engineering and Procurement Division is responsible for R&D and the purchase of system equipment. Two supportive divisions have to be mentioned: BT International Products, which is responsible for developing, producing and marketing telematic products internationally, and BT Overseas, which sells BT's knowledge and expertise abroad.

In order to reduce organisational complexity and management costs BT was once again restructured in 1990-91. This new 'efficiency drive', named Project Sovereign, aimed at removing of management layers and dismantling BT's established structure of relative geographical autonomy. The established divisional pattern, based on responsiveness to local customer needs, was replaced by a new structure, based on two business units. The first would focus on large individual businesses (notably large multinational companies) and the second would deal with residential customers and small and medium-sized businesses (BT 1992). The Business Communications Division (e.g. Syncordia, GNS) would handle business customers by providing managed network services and systems integration services for the complex needs of leading edge customers; in the UK BCD is structured on the basis of 5 geographical sectors. The Worldwide Networks Division (combining BT's UK and International Networks) is responsible for domestic and international network management; in the UK market the division is made up of 3 geographical areas. The Personal Communications Division provides services to residential consumers through nine regional PC Customer Service Zones. The former Engineering and Procurement Division was renamed into Development and Procurement. BT Enterprises was split into the Products and Services Management Division, focusing upon emerging markets and managing innovative facilities through multi-divisional product teams, and the Special Businesses Division, lodging BT's separate subsidiaries and joint ventures. The responsibilities of the latter could be subdivided into five business areas: Cell-net (the 60% BT-owned mobile operator), BT Mobile Communications (provider of cellular radio and paging services), Operator Services (supplier of directory enquiry, operator assistance and emergency services), Visual and Broadcast Services (providing terrestrial and satellite services) and Yellow Pages (providing directive and classified information).

BT has become more efficient with operations continuing to grow and new products and services being marketed successfully. BT has become much more sensitive both to its residential customers and to its business customers, through the implementation of an advanced computerised Customer Services System CSS (the 'Front Office'), that integrated customer billing, stores, fault diagnosis and repair, clerical work as well as centralised control over work in one automated system. In 1989, BT introduced guaranteed contract terms for installing, repairing and maintaining its services and compensating customers financially if these terms were

not met. Through this Customer Service Guarantee Scheme, BT (1991a) hoped to improve the relationship with its clients by committing itself to keep up a complete set of service standards and to provide guarantee and compensation schemes for poor service. It also introduced a rebate scheme for low users, called Supportline. The combined effects of the introduction and implementation of new technologies (digitisation of the network and automated office systems), tight price controls, fierce competition in both domestic and international communications and the recession that manifested itself at the late 1980s, have fostered a continuous drive within the BT organisation to increase efficiency and keep up profitability levels. These objectives were achieved by cutting labour and overhead costs, short-term contracting and putting out ancillary services like the cabling and maintenance activities. Or formulated more simply by BT (1992a): *'today's technology means we must provide a better service with fewer people. If we don't, somebody else will'*. BT's staffing levels have been reduced significantly from 253,000 in 1981 to 156,000 in 1994 (BT Annual Report 1995). Between 1981 and 1987, BT's workforce was gradually reduced with 20,000, followed by an increase with about 12,000 between 1987-1990. The temporary increase in manpower levels was instigated by BT's programme to upgrade its performance through the modernisation of the infrastructure by replacing analogue by digital switches and through enhancing the speed and quality of service to its customers, of which a drastic reduction of staffing levels of almost 100,000 between 1990-94 was the result (see table 4.1.). The cost of massive redundancy schemes, together with tighter price controls and the depreciation of loss-making equipment ventures, largely explain the drop in BT's profits in 1993.

The effect of privatisation and deregulation on BT's system of industrial relations is rather ambiguous, characterised by drastic pay level increases for every employee on the one hand and numerous redundancies, a decentralisation of collective bargaining, flexible pay terms and less consensualist management style on the other. The labour of senior and middle management have been effectively challenged by BT's countermove from standard pay terms to favourable performance-related pay schedules and personal contracts (STE 1989). Since privatisation, BT-employees have done well with pay increases well above the rate of inflation: wages have gone up with 54.6 % for engineers, 66.9 % for general management and 344 % for the CEO (NCU 1992). The stable social climate of the former Post Office/BT was severely challenged by the drastic changes inside and outside BT. The intention of BT-management was to achieve higher levels of productivity and profitability by increasing market shares and trimming operating costs (shedding labour and trimming overhead). The traditional cooperative system of industrial relations was replaced by bilateral and more flexible arrangements at the district and division levels of the corporation. Today, representatives of BT and the unions meet and settle labour agreements in 17 decentralised units. Centralised pay bargaining persisted, but lower management tiers now handle some labour conditions (grade evaluation, training, hours of service).

Over the years, BT Management has become more hostile to the unions, providing them with less information about investment plans and strategic issues and gradually

abandoning existing consultation and arbitration arrangements that had kept the industry virtually strike free. Although BT's strategy with respect to industrial relations was surely not going as far as the de-recognition policy followed by C&W/Mercury and still resembles to some extent the consultative patterns of the past, there have been some attempts to divide, curtail and marginalise the unions (NCU 1992; Smith & Terry 1993). Notwithstanding the various attempts of BT Management to split, circumvent and cut back union powers, unions have continued to remain relatively strong in terms of membership and density (about 80 per cent of BT's workforce is unionised) and consequently continued to be involved in collective bargaining on pay rewards at national level. Traditionally, BT recognised four unions in collective bargaining: the National Communications Union NCU (a merger of the POEU and CPSA), UCW, STE and CMA with the BTUC functioning as the union's federation. The unions became further isolated by BT Management reluctance to recognise trade unions in most of its new subsidiaries and acquisitions and by the extensive use of short-term contracts and contracting out of labour. The power of the unions was dispersed even further by the 'divide and rule' strategy of BT Management, that was aimed at outplaying the individual unions against one another. It rejected collective negotiations and insisted on splitting collective bargaining into bilateral negotiations with the individual unions. BT's union avoidance approach was facilitated by a lack of coordination within and between the various recognised unions. The larger NCU was still divided between its engineers and clerical workers and major disagreements between the NCU and the medium-sized UCW have prevented effective collaboration and consolidation between the two. Furthermore, BT-management has attempted to bypass the established union channels by strengthening direct communications with its personnel. The individualisation of labour relations has manifested itself through employee share ownership, the large scale introduction of management teams (team briefings, quality circles and total quality management) and the introduction of flexible remuneration arrangements with more a personal appraisal and individual rewards.

The plans for and execution of privatisation, subsequent re-organisation rounds and job-cuts within BT have caused malcontent among its staff, eventually leading to three large industrial disputes. The first, a massive strike on the 'Day of Action' in 1982, was provoked by the government decision to privatise BT. The second national strike happened in 1985 when pay negotiations between BT and the unions broke down; the third and largest industrial dispute took place in the beginning of 1987, when BT engineers conducted a national strike against measures of BT-management to make BT's workforce and working conditions more flexible. The engineers argued that these efficiency measures would lead to an increasing workload and possible redundancies without sufficient compensation schemes. The complaints of BT staff were already expressed in a study commissioned by the BTUC (1986), entitled 'A Fault on the Line'. The report aired what had happened to BT after the floatation: higher domestic charges had hit ordinary and disadvantaged users, new charges had been introduced for the emergency & enquiry services (which had previously been free), the abandonment of BT's 'Buy British' policy had put jobs at risk, standards of

service had gone down, R&D funds had been cut back, safety was given less priority and staff conditions had worsened.

The year 1987 turned out to be crucial for BT's corporate development for two reasons: the industrial dispute between BT-management and its engineers and the implementation of new digital switching technology and its subsequent teething problems. The already bitter social climate in the aftermath of 1987-strike worsened even further when BT Management refused to pay 'bonuses' on employee shares to its personnel, despite huge profits being announced at the end of the year (BT Annual Report 1987). These two incidents, together with the disastrous breakdown of the BT-network in the City on October 23rd 1987, seriously called into question BT's performance and quality of service, leading to severe complaints from the entire user community and OFTEL (1987). These pressures triggered BT Management to initiate an ambitious campaign to improve services to customers, including enquiry services and public telephone boxes. After the network had been upgraded successfully and the industrial dispute had been settled, BT-management responded with the implementation of a large Total Quality Management programme. The greater emphasis on productivity and quality improvements was also accomplished through the already discussed Project Sovereign, designed to improve BT's performance and quality of service by making its divisions more customer-focused, removing layers of management and reducing its workforce substantially. As a consequence of this almost permanent restructuring, characterised by a large number of redundancies and major threats to job security, complaints about a lack of control over work and de-skilling of labour, and a devolution of concerted industrial action, suggest that the working morale of the BT workforce went down (Smith and Terry 1993).

Table 4.1: Key Data BT

BT	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94
Work-force (x 1000)	253	252	246	241	235	236	234	237	244	246	227	211	171	156
Turnover (£b)	4.6	5.8	6.4	6.9	7.7	8.3	9.3	10.2	11.1	12.3	13.2	13.3	13.2	13.7
Profit before tax (£b)	0.6	0.9	1.0	1.0	1.8	1.5	2.1	2.3	2.4	2.7	3.1	3.1	2.0	2.8
Profits as percen-tage of turnover	12.5	16.2	16.1	14.4	23.3	17.8	22.3	22.5	21.6	22.0	23.5	23.3	15.2	20.4

Source: BT Annual Reports 1981- 1994

After the failure of System X, the newly privatised BT steadily loosened its cosy relationship with the domestic manufacturers GEC, Plessey and STC. The 'Buy British'-policy and the various collaborative development projects between BT and its preferred suppliers was replaced by more open procurement policies. BT reduced its dependence on the domestic industry by adding the semi-foreign manufacturer Ericsson/Thorn-EMI to its list of suppliers. With the acquisition of a 51 per cent share in the Canadian PABX-manufacturer Mitel Corporation in 1986 BT attempted to establish itself as a supplier of exchange equipment. Further overseas acquisitions

included inroads of BT into electronic mail and message handling, cellular telephony and global value-added networks with the procurement of ITT Dialcom in 1986, the acquisition of a 20 per cent stake in McCaw Cellular (the leading cellular service provider in the US market) in 1989. In the same year BT purchased the leading US-based value-added service provider Tymnet from McDonnell Douglas to enhance its ability to provide network services for major customers world wide. Tymnet was integrated in BT/GNS Global Network Services and was later sold to MCI, as part of the formation of the Concert alliance. BT expanded its service to large users by establishing Syncordia, a separate firm Syncordia based in Atlanta (USA), that provided network management tools for multinational customers (outsourcing and one-stop shopping services). BT also holds minority shares in the telecommunications operators of Belize and Gibraltar and 15 %, 10 % and 8 % stake in the satellite consortia, Eutelsat, Inmarsat and Intelsat, respectively (see table 4.2).

In 1989 BT reversed its corporate strategy, so far based on diversification and vertical integration, into an approach that concentrated explicitly on the core business of telecommunications. This global networking strategy, is designed *'to provide world-class telecommunications and information products and services, and to develop and exploit our networks, at home and overseas, so that we can: meet the requirements of our customers, sustain growth in the earnings of the group on behalf of our shareholders, and make a fitting contribution to the community in which we conduct our business' (e.g. BT Annual Report 1994).* BT sought to divest itself of its equipment manufacturing activities and other activities, regarding them as loss-making or lying outside its core business of global networking. Therefore BT sold its Consumer Electronics subsidiary to STC/Northern Telecom in 1991 and two years later its 20 per cent share in McCaw to its large competitor AT&T (finalised in 1995), also disposing of its interests in the loss-making Mitel-subsidiary and three other equipment manufacturing subsidiaries. Today BT focuses on the major business customers in the three major world telecommunications markets, namely North America, Western Europe and the Asia/Pacific Regions. Important ventures within BT's new strategy of furnishing network services to international business, *'Going Further Staying Closer'*, are the Atlanta-based Syncordia and Global Network Services GNS (BT 1991b). The former provides multinational customers with facility management and specialised outsourcing services for their telecommunications networks and the second offers advanced data processing services and value-added networks.

BT's internationalisation strategy showed mixed results: it found a strong partner in the USA, while making some non-exclusive agreements and smaller acquisitions in Europe, and coverage in the Pacific Rim was still weak. As part of its aggressive strategy to become one of the leading telecommunications companies in the world, BT decided early 1993 to penetrate the large US market by providing intercontinental services. Without collaboration from any of the American operators (AT&T, MCI and Sprint), BT intended to construct a virtual private communications network in the US as another step in the construction of a global switched voice network, connecting all the major business centres across the world. This Cyclone project would, together with Global Network Services GNS and Syncordia, complete the

portfolio of BT services and facilities to multinational businesses. BT's ambitious world-wide project to be established on a go-alone basis proved, however, more complicated than originally foreseen. BT relied upon the consent of national governments to liberalise their protected markets, while at the same demanding reciprocity to open up the UK market. The realisation of BT's virtual network in the US ran into problems, when BT applied for a US domestic and international license from the FCC. After being put under strong pressure from AT&T to block BT's application for US operating licenses, the FCC delayed the authorisation procedure. AT&T responded by applying reciprocally for a license in the UK to offer big companies international communications services. BT was more or less forced to revise its ambitious plans to penetrate the highly competitive US market on its own by choosing a more collaborative path and teaming up with a US-based partner.

Table 4.2.: Major Partnerships of BT

Subsidiaries/participations of BT	Activity	Interest of BT in allotted capital and associated partners	Country of Registration or location of headquarters
BT North America Inc (sold to MCI, as part of the strategic alliance)	value added network systems provider	100 %	USA
Syncordia Corporation	specialised network services provider	100 %	USA
BT France	communications services provider	100 %	France
BT Worldwide Ltd	international network systems provider	100 %	UK
BT Marine Ltd	subsea engineering contractor	100 %	UK
British Telecom CBP Ltd	specialised telecom equipment provider	100 %	UK
BT Repair Services	telecom equipment maintenance provider	100 %	UK
BT Property Ltd	property holding company	100 %	UK
BT Australasia Pty Limited	communications related services and products provider	100 %	Australia
BT Telecom Deutschland GmbH	communications related services and products provider	100 %	Germany
Manx Telecom Ltd	telecom services supplier	100 %	Isle of Man
McCaw Cellular Communications Inc (sold in 1993, finalised in 1995)	mobile cellular and broadcasting systems provider	20 %	USA
MCI	large national and international operator	20 %	USA
Mitel Corporation	telecom equipment manufacturer	51 %	Canada
Cellnet Solutions /Telecom Securicor Cellular Radio Ltd	mobile services operator and provider	60 %	UK
Eutelsat	European satellite consortium	18 %	France
Inmarsat	maritime satellite consortium	10 %	UK
Intelsat	international satellite consortium	7 %	USA
Belize Telecommunications Ltd	telecom services supplier	25 %	Belize
Gibraltar Telecommunications International Ltd	telecom services supplier	50 %	Gibraltar
Marshall Finance Ltd	money broker	301% (ordinary) 100 % (preference)	UK
Yellow Pages Sales Ltd	Yellow Pages sales contractor	100 %	UK

Source: BT Annual Report 1994

In the summer of 1993 BT joined forces with the second biggest long distance and international operator in the US telecommunications market, MCI. BT obtained a 20 per cent stake in MCI ($4.3b) and jointly they embarked upon $1b global services venture, called Concert. This Anglo-American venture will offer outsourcing communications facilities for multinational businesses, develop global products and services, create integrated service management, end-to-end connectivity, and establish a global managed network platform for advanced business services. The two companies agreed on a geographical division of labour: MCI would become the distributor of all these Concert services in the USA, BT would cover Europe and Asia. After a year of investigations and negotiations the Concert joint venture was approved by the American FCC and the European Commission in June 1994. At more or less the same time, the American-English market access dispute was solved: BT was awarded with an American international simple resale (ISR) license, that would enable it to offer services to the UK from the US, AT&T was offered a similar license in the UK. BT managed to gain access to the Spanish market by agreeing upon a 50/50 venture with Banco Santander for the provision of value-added-network services. Simultaneously, BT faces strong competition in its home base from Mercury/C&W, the cable operators and - more recently - AT&T/Unisource and Telstra, the Australian PTO. The strategic alliance of the French and German PTOs with Sprint, the third US network operator, might also pose a serious threat to BT's still solid position in the UK market in the near future.

BT's Contenders

Until 1990, Mercury Communications Ltd. was exclusively licensed to compete with BT. Originally Mercury was owned by a consortium, including Cable and Wireless C&W, British Petroleum BP and Barclays Bank. After the assignment of the license to operate a public voice telephone service in 1983 and OFTEL's pro-competitive ruling on interconnection to BT's network of 1985, Mercury was able to launch its telephone services in 1986. Mercury gradually expanded vertically into apparatus supply and maintenance. In 1988, C&W acquired the Telephone Rentals company (distributing and leasing equipment to corporate users) and integrated it into Mercury. After the introductory phase, Mercury built up a solid presence in voice telephony, the leasing of private lines and public payphones, datanetwork services and radio paging and cross-border communications (relying upon the international links of its parent C&W. Mercury has entered into joint ventures with Motorola in CallNet (radiopaging), US West in One-2-One (PCN-services), and with ICL Computers in the provision of datanetwork services. Mercury chose not to manufacture network equipment, but decided to rely upon open tendering (e.g. the Canadian supplier Northern Telecom). Mercury (1992, 1993a,b) actively promoted regulatory policies by the government, that would cultivate fair and transparent competition between the incumbent and the new entrant. A free-for-all deregulation policy would not suffice to allow for free entry and fair play conditions in the UK market. Therefore Mercury suggested asymmetric regulation between BT and new entrants as the way to promote effective competition.

Mercury has become commercially successful in the markets of high-volume, customers and cross-border communications. It ignored the local services market of residential users and, instead, exploited the lucrative business and international markets. Mercury followed a marketing strategy aimed at a competitive pricing (10 to 20 per cent below BT), high levels of quality of service and product innovation (e.g. fully digital networks, itemised billing, call routing services). Furthermore, in 1993, Mercury launched PCN-services in collaboration with the Regional Bell Operating Company US West. In the same year BCE, the leading Canadian telecommunications company, acquired a 20 % stake in Mercury, reducing C&W's stake to 80 %. In 1994 Mercury employed about 10,000 people and had a customer base of more than 50,000 corporate and professional customers, mostly located in the larger urbanised areas. In its management philosophy, Mercury strongly emphasised the increase of internal flexibility by the creation of a union-free workforce, quality circles and a *cafeteria* pay and reward system (Bradley 1992). Like its parent C&W, Mercury followed a de-recognition policy towards the unions, setting individual work objectives instead of bargaining collectively. The implementation of performance-related contracts, employee participation schemes (SAYE Save As You Earn), total quality management and worker-management joint decision-making committees were illustrations of a trend away towards the individualisation of industrial relations. In December 1994, however, Mercury announced that it gave up its aspiration to become a local access provider: it discontinued its local-loop and pay phone services and narrowed its focus to reaching its domestic subscribers: through third parties (i.e. cable operators or BT). As a consequence of this rationalisation measure, a quarter of Mercury's workforce would be cut back.

Mercury is a subsidiary of Cable and Wireless C&W, one of the first state enterprises to be privatised by the Thatcher Government in 1981.[7] Three years later it acquired 79 per cent of the shares of the highly profitable Hong Kong Telephone Company HKT. Since then, C&W has expanded rapidly and has become one of the fastest growing companies in the world, rated as no. 24 on the list of Europe's top 500 firms (FT 20-1-1994). Its turnover and profits before taxation increased from respectively 1,2£b and 0,34 £b in 1987 to a turnover of 4,7 £b and a profit before taxation of 1,1 b£ in 1994 (C&W Annual Report 1994). C&W is a leading international telecommunications operator with major hubs through the establishment of more than 50 subsidiary companies all around the world. The company employs about 41,000 people: about 40 % of its workforce is Hong Kong-based, 25 % UK-based, and 20 % is located in the Caribbean (C&W 1994). The corporate strategy of C&W is aimed at strengthening its position as a major force in world-wide telecommunications through the establishment of a federation of telecommunications companies of a global super carrier and local niche operators. This world-wide strategy is made up of three related objectives: the provision of global end-to-end services for business customers, the expanding of basic telecommunications services

7 An interesting fact of the new situation in UK telecommunications is that the two major competitors in the domestic and international market place, C&W and BT, are both former state-owned enterprises.

(particularly in less developed countries) and the building up of a solid base in mobile communications around the world (C&W 1993).

For its large multinational business customers, C&W is building a *Global Digital Highway*: a world-wide digital network of fibre optic cables, that connect the major business centres around the world. Through its existing subsidiaries Mercury and Hong Kong Telecom C&W already had a strong position in the UK/Europe and the Pacific Rim, but it also sought to penetrate the Japanese and Australian markets. C&W has taken a 18 per cent minority stake in the Japanese IDC company (the licensed international carrier providing value-added services in Japan and abroad) and committed itself to a 21 per cent investment in the Australian Optus company (the second fixed carrier and GSM operator). C&W has also built up a base in North-America by acquiring the small US domestic and international carrier TRT/FTC in 1991, herewith creating C&W Inc. US. In 1993, C&W associated itself with Bell Canada through the latter's acquisition of a 20 per cent stake in Mercury for £982m and teamed up with the American Regional Bell Operating Company US West in the Mercury One-2-One joint venture. Over the years, C&W has built up a strong presence in developing countries through substantial equity stakes in dominant local carriers in the Middle East, Caribbean, and South East Asia regions (e.g. in Bahrain, Pakistan, Jamaica, Barbados, Philippines, and Macau). C&W also has become strongly involved in the operation and exploitation of digital mobile services. In 1990/91 C&W penetrated the Swedish and German mobile communications market with the acquisition of a 39.9 % stake in the Swedish service provider Comvik/Tele 2 AB and a 5 per cent stake in the German service provider Mannesmann/D 2. These mobile operators were licensed to compete with the national telephone companies Televerket/Telia Sweden and the Bundespost Telekom.

Another powerful player emerging from the liberalised UK telecommunications market is Vodafone (rated no. 74 on Europe's top 500, FT 20-1-1994). Originally a subsidiary of RACAL Electronics, Vodafone launched its cellular system in the UK in 1985, and successfully built up an overseas presence (Vodafone Annual Report 1994). Vodafone has become a strong niche player in the cellular market as operator, service provider and mobile equipment manufacturer (through its subsidiary Orbitel). In 1993 it de-merged from RACAL and became fully independent. The company has minority shares in the domestic service providers for cellular networks Martin Dawes and GMC Talkland, and minority commitments in foreign mobile operators: E-Plus Mobilfunk (Germany), Pacific Link Communications (Hong Kong), Panavox/Panafon (Greece), Vodam/Vodac (South Africa), SFR (France), Nordic Tel (Sweden) and Dansk Mobiltelefon (Denmark). Besides the competitive threat in the local loop through cellular communications, BT's position became also challenged by the entry of new 'multi-service' cable operators, that offered a combination of broadcasting programmes and telephony. Although starting from scratch, cable density figures go up quickly, due to a combination of new technology and imported market experience, lower prices (on average 20 % less than BT), and attractive and competitive packaging of services. Among the local cable franchises, a process of regional coordination and loosely coupled integration between local cable companies and trunk operator Mercury has taken off in 1992/1993 with the London Interconnect

agreements (including Bell Cablemedia/Encom, General Cable, Nynex, SBC/Telewest and Videotron) and Northern Interconnect (including Cable North West, Nynex, Yorkshire Cable and Bell Cable media).

4.8 *Regulatory Reform of UK Telecommunications Policy*

The creation of an independent regime for standards setting and type approval in 1981 could be regarded as the first step towards separating the regulatory and operational activities of BT. The British Standards Institute (BSI) and the British Approval Board for Telecommunications (BABT) took over BT's exclusive responsibilities on testing and approving equipment. The new regulatory framework was extended three years later by the installation of the OFTEL-body, replacing the Post Office Users National Council. In July 1984, BT was finally relieved of its administrative responsibilities, falling under public law: its former policy supportive functions were transferred to the Department of Trade and Industry, its regulatory tasks to OFTEL and its approval activities to the BSI/BABT. With the implementation of this new institutional structure, the principal questions became: how to guarantee universal service, how to prevent BT from using its dominant market position to exploit consumers and how to promote fair competition in the domestic market. Firstly, in a letter of non-interference the government distanced itself from the commercial operations of the company to be privatised by ensuring that BT, in its normal business activities, would not be subject to the short-term goals set by the government. Secondly, to resolve the emerging conflicts of interest between the government as policy maker and regulator, the jurisdiction in the telecommunications domain was shared between the Department of Trade and Industry DTI and OFTEL. The first sets the broad outlines for the development of telecommunications policy, its international aspects and furthermore issues all the various licenses. The second recommends upon policy matters and applies the broad rules of the DTI by monitoring the license requirements, establishing price controls and service obligations and promoting fair trading conditions.

Officially OFTEL (1990) is responsible for:

- ensuring that all reasonable demands for telecommunications services throughout the UK are met (this requires the continued provision of the emergency services, public call box services, and services in rural areas);
- ensuring BT and other licensees to comply with their license conditions (i.e. meet statutory obligations and charge a fair price for its services where possible);
- promoting the interests of consumers and purchasers (with regard to price, quality and variety of services offered), efficiency, effective competition, and the development of a technological and economic base for the telecommunications equipment and information services industry (R&D, strengthening the ability of the domestic industry to compete at home and overseas and attracting foreign investment).

OFTEL, set up under the 1984 Telecommunications Act, was constituted as a non-ministerial government department to insulate regulatory activities from short-term political pressures and government interference. OFTEL's status as an independent specialised agency acting relatively independently from parliamentary and ministerial controls , allows for informal and secretive negotiations about the enforcement and modification of licenses between the regulator and its industry. OFTEL's staff are civil servants and its expenditure for running the agency is provided by Parliament, but the cost is met almost entirely from license fees which in the case of the larger franchised operators are broadly related to the size of the turnover of the licensed businesses. OFTEL is headed by a Director-General of Telecommunications DGT, who is appointed for a fixed term, independent from ministerial control and who cannot be dismissed under normal circumstances. In July 1984, Bryan Carsberg, a former professor in accounting, was appointed as DGT; in 1993 he was succeeded by the economist Don Cruickshank. The DGT has the exclusive responsibility for the enforcement of licenses with strong powers to ensure that the conditions of the licenses are complied with. He alone can inaugurate an amendment of a license, either by agreement with the licensee, or failing to reach such an agreement by making a reference to the MMC to review the proposed license amendment. The external administrative structure of OFTEL is made up of national Advisory Committees on Telecommunications (England, Scotland, Northern Ireland and Wales), two committees representing the interests of the elderly and the disabled people and small businesses; additionally the DGT has the duty to consult the representation of interests by large users and local customers (through 170 Telecommunications Advisory Committees).

In contrast with the American regulatory agencies that are known for their open access conditions, OFTEL at first exhibited a non-participatory model and facilitating informal negotiations between regulatory and industry. It was not obliged to hold public hearings or to be open to public scrutiny (Heald 1988: Graham & Prosser 1991; Veljanovski 1991a). Two other shortcomings have been identified in OFTEL's regulatory structure: the near absence of appeal procedures and the concentration of power in the Director-General (DG) (Foster 1992; Strickland 1993; Harper 1995). If agreement cannot be reached between the regulator and the regulated industry over changes to a license or a price control, the issue may be referred to the MMC. This is an unattractive option for the two parties, however, given the fact that MMC references are often time-consuming and costly. The DG, appointed by government and supported by a staff and an office, is personally responsible for the regulatory duties, as laid down in the law, to supervise parts of the industry's activities and apply competition legislation to the telecommunications industry.

Recently, OFTEL has acquired more transparency and openness in its decision-making. Especially during the 1990-91 Duopoly Review, OFTEL's role in the policy process was very active through organising industry-wide consultations about future policy directions, explaining its particular measures and decisions in public and publishing the relevant information for key regulatory issues and the DGT's advice to the Secretary of State. The small size of the regulator and its structural dependence for strategic information on the large enterprise to be regulated has thwarted its

development towards becoming a relatively powerful watchdog. Over the years OFTEL has had increasing influence in the shaping of the telecommunications market in Britain. This might be the result of political entrepreneurship from the Director-General and the agency itself, but it is also the effect of an interdependent regulatory framework in which the OFTEL agency is loosely coupled to other institutions like the OFT, DTI, and the MMC, that gave the system sufficient flexibility and dynamism. In addition to the existing legislation in the Fair Trading and Competition Acts and the competition rules in the Treaty of Rome, the Government created a regulatory system especially designed for the telecommunications sector. As Vickers and Yarrow (1988: 235) have made clear, there has been a tension in policy making between the desire to promote the well-being of the incumbent and the desire to promote effective competition and regulation; as we will see later on, more emphasis was given to the first.

The Thatcher Government decided not to follow the American example of the Federal Communications Commission (FCC) as a large administrative agency and instead decided to create a relatively small agency, headed by one Director-General and a compact workforce of civil servants. It was argued that a FCC-like agency would lead to rather rigid structures dominated by litigation and bureaucracy, that would be not flexible enough to deal with the techno-economic turbulences in the telecommunications environment (Pitt 1990). With a staff of only approximately 160, OFTEL is relatively small compared with the large regulatory agencies in the US (cf. FCC about 1800 people). The British Government rejected the US model of rate-of-return regulation. Such a regulatory regime, aiming at controlling profits, would lead to overcapitalisation (i.e. the gold-plating syndrome) and its effect upon encouraging innovation and competition was regarded as insufficient. Instead the Government followed a regulatory policy of price-controls, that would encourage the efficiency of the public operator and overall competition in the domestic industry. It also would assure tariff stability for customers, protecting them from monopoly abuse (e.g. excessive prices, discriminatory behaviour, undue cross-subsidisation or poor quality of service). The rationale for regulating the privatised utilities in Britain had been provided by Littlechild (1983: 7):*'Competition is indisputably the most effective means - perhaps ultimately the only effective means - of protecting consumers against monopoly power. Regulation is essentially a means of preventing the worst excesses of monopoly; it is not a substitute for competition. It is a means of holding the fort until competition arrives. Consequently, the main focus of attention has to be on securing the most promising conditions for competition to emerge, and protecting competition from abuse.'*

The Government adopted a regulatory system based on price controls, as proposed by Littlechild, that inserted particular conditions in BT's license to prevent the prices of BT's monopoly services being increased faster than the annual inflation rate in the economy. The government argued that price-cap regulation integrated adequate safeguards to protect customers from the abuse of monopoly power with strong incentives to increase efficiency, tariff rebalancing and effective competition. The 1984 license required BT to ensure that the charges for a basket of services, namely local and trunk calls, residential and business lines rentals, did not rise faster than 3

percentage points less than the annual inflation rate. The RPI-3 regulatory scheme originally covered about 55 per cent of BT's activities. Before 1991 there was no price control on international services, customer premises equipment and value-added services; recently international services have been included in the basket. The price control agreement was originally set at RPI-3, but later OFTEL set a more stringent 'cap' on the basket of BT's regulated prices by changing it to RPI-4.5 in 1989, revising it to RPI-6.25 in 1991 (also including international call prices) for RPI-7.5 from August 1993 onwards. BT has received more freedom in its pricing policy with the packages concession to offer volume discounts on call charges and alternative tariffs to large users.

Compared to the shortcomings of traditional rate-of-return regulation, this RPI-X system had its own serious drawbacks. As Garnham (1990: 10) has argued: *'while prices are controlled, other parameters move out of control'*. As a consequence of this regulatory system BT's profits went up rapidly, allowing BT to channel extra funds it into new business ventures and overseas acquisitions instead of investing these enormous revenues in upgrading the domestic network, seriously constraining BT's quality of service at home. In 1992, when BT had made huge profits, OFTEL, told BT to invest in the construction of a universal digital broadband infrastructure to serve the interests of British economy as a whole. Another unexpected consequence of price-control regulation is that it encourages an organisation to strive for efficiency and phase out cross-subsidies; hence it puts a premium on cutting overhead and labour costs, and consequently causes a high number of layoffs. The price-capping system has triggered a process of drastic tariff rebalancing by bringing tariffs more closely in line with costs and shifting charges by cutting prices in those areas where competition between BT and Mercury is present and raising them where exclusive service provision by BT prevailed. Tariff re-balancing has caused sharp price increases for residential customers (e.g. line rentals and connection charges), decreases in residential usage charges, and enormous price cuts for large business users, accomplished through bulk discounts and other tariff packages (OECD 1990; OECD 1995).

Before workable competition could be established in a deregulated and privatised sector, however, the Government was convinced that regulation could prevent the worst excesses of monopoly and protect emerging competition. OFTEL became responsible for managing the transition from a monopolistic to a more open environment by encouraging genuine competition, to promote the development of innovative systems and to protect consumers. The encouragement of competition was envisaged as indisputably the most effective means of protecting consumers from monopoly power. OFTEL was modelled after the existing Office of Fair Trading OFT (created in 1973), the administrative agency in charge of monitoring monopoly abuse and anti-competitive practices. (Veljanovski 1987). Through its detailed investigations into the telecommunications industry structure and its consequent decisions and determinations, OFTEL actively promoted the goal of encouraging effective competition and increasing the availability of better and more policy information from and about the regulated parties. In 1984, when BT and IBM jointly applied for a license to provide managed data network services (the JOVE-initiative),

OFTEL advised negatively, on the ground that such a joint venture would simply be too powerful. OFTEL gave a positive recommendation on the BT-Mitel case. In the emerging market of cellular radio, OFTEL stipulated that the fixed network operators, BT and Mercury, were not allowed to participate in their own right; a minority stake in the consortia to be established to run mobile networks was permitted. Another important contribution towards the development of a more open market was OFTEL's determinations to settle interconnectivity between the existing and the newly created networks. In order to provide its long-distance and international services and to enable fair competition between the two network operators, Mercury demanded full access to BT's local networks. OFTEL gave a strong impetus to an effective duopoly with its ruling on interconnection between BT's and Mercury's networks. The interconnection disagreement between the two operators was finally settled early 1986, when OFTEL decided to give Mercury the right to interconnect with the BT system on favourable terms (i.e. at cost-based charges).

OFTEL has become involved in encouraging and ensuring the quality of service provision. When BT stopped the systematic publication of quality of service statistics on the grounds of commercial confidentiality, OFTEL sought to develop monitoring instruments on BT's service of its own. After the National Consumer Council (NCC 1987) had raised complaints about BT's disappointing performance in terms of faults, delays of new connections, unsatisfactory operator and enquiry services and inadequate regulatory regime, OFTEL (1987) responded by pushing BT to accept higher levels of public accountability with regard to service quality of service and internal management controls. BT promised to improve the quality of its service to customers: since 1987 it has published quality of service indicators every six months, installed a customer guarantee scheme (in case BT fails to meet certain service obligations) and introduced itemised billing on request (NAO 1993). Mercury followed BT's example and also publishes bi-annual Quality of Service reports. The Competition and Service (Utilities) Act 1992 assigned additional powers to the public utility regulators, including DGT/OFTEL, to set standards of public service provision to be achieved (in terms of quality, choice, value and accountability), to determine compensation where those standards are not met and to set overall performance objectives. In the case of telecommunications, OFTEL required the two 'designated' operators of relevant (basic) services, BT and Kingston upon Hull, to set adequate arrangements, dealing with the publication of information about performance and to install procedures dealing with complaints, dispute resolution and compensation.

Another illustration of a case requiring regulatory action from OFTEL was the establishment of a code of practice and other arrangements for the chatline and other message services. After receiving complaints about excessive charges of these services, unacceptability and objectionability of contents and misleading advertising, OFTEL (1988) responded by a further investigation, suggesting costly improvements to BT and eventually the alternative of a License amendment. To follow the latter path of license modification the DGT in July 1988 referred these problems to the MMC; seven months later the MMC Report on Chatlines and Other Message

Services was published. The MMC and OFTEL (1989) agreed there was a need to regulate these services and to control message content mainly through a Code of Practice, negotiated between the different operators and service providers involved; this measure could be supported by additional arrangements aimed at stimulating selectivity and exclusivity of use (contracting in, call barring and itemised billing. In December 1991, OFTEL (1991b) issued a statement aimed at ending the unfair cross-subsidy of BT's apparatus supply business, which included the sale and rental of telephones and other equipment.

The encouragement of effective competition in a business environment increasingly characterised by a multitude of operators and a multiplicity of telecommunications networks and services forced OFTEL (1993b) to consider any choices for the future with respect to numbering arrangements. Traditionally the numbering scheme was developed and controlled by the Post Office/BT, but in order to preclude any exclusive property rights over telephone numbers and to cope with increasing demand for the portability of numbers and personal numbering services in the 21st century OFTEL in the 1991 White Paper acknowledged its regulatory authority for the UK numbering scheme. In September 1991 the control and administration of the UK numbering systems passed over from BT to OFTEL. In the near future OFTEL will have to draw up a plan for the allocation and administration of numbering capacity, that secures full access to the new competitive networks and services and facilitates the portability of numbers (e.g. between operators and service providers, within service types and possibly geographical locations).

In the new regulatory setting BT is required to establish separate accounting and reporting arrangements for the systems and apparatus supply business. BT is allowed to manufacture equipment, provide the activity is accommodated in a separate subsidiary of the organisation, so that separate accounts can be produced for network and manufacturing activities to demonstrate that there has been no cross-subsidisation. Under the terms of the 1984 Act and its Master License, BT is required to interconnect its system to other systems, such as those of Kingston upon Hull Communications and Mercury/C&W, mobile communications networks, and other network operators and service providers. BT's license includes special arrangements for determining the terms on which interconnection is to be made between its system and other licensed networks. If BT is found to be within breach of its license, and is not willing to give in at forehand, OFTEL might be able to apply to the courts and BT might be liable for damages. It is also within the powers of OFTEL to refer BT to the MMC, for example, to adjust the terms and conditions of interconnection.

After receiving complaints about the inequality of bargaining power and strategic information between BT and the competing operators, OFTEL in 1992 embarked upon a policy to demand BT to provide more detailed information about its interconnection agreements, cost allocation methodology, interconnection charges and revenues. Given the development towards a 'multi-operator and multi-service' business in telecommunications, OFTEL regarded the elements of interconnectivity and information symmetry as vital to its policies. In order to improve the equability and transparency of domestic services and to make the charges more efficient and

sustainable, OFTEL (1992c; 1993a) pushed for accounting separation between the different BT businesses and to publish separate accounts for each business. For the development of standard interconnection charges and the establishment of a more transparent process for relating costs to charges, BT's collaboration was crucial for OFTEL (BT 1993): any alternative going further than accounting separation would be strongly opposed by BT (e.g. the alternative of implementing structural separation between the local and long-distance activities).

OFTEL (1994a,b) came up with a less radical solution by suggesting the implementation of a differentiated auditing regime for BT's Network (wholesale), Retail and Access (connections and rentals) businesses. This would generate separate accounting disclosure of local, national and international calls, private circuits, public payphones, terminal equipment and non-regulated activities. BT would work towards fully separate accounts for its network, retail, and access activities to be implemented before 1996. TMA (1993) and Mercury (1993b) agreed in their evidence, that OFTEL's approach was risk-aversive and one-sided; for instance the TMA (1993: 14) argued that: *"The key issue is that in BT's interconnection negotiations with other operators, its vertically integrated structure engenders an atmosphere of secrecy, encourages delay and inhibits redress. The consultative document does not solve these aspects of interconnection and does little more than foster the view that BT should publish its interconnect agreements."* According to TMA and Mercury, OFTEL focused too narrowly on accounting separation, and ignored the larger picture of clear identifiable roles and functions within the industry, and the feasibility of establishing an appropriate interconnection regime. Larger and more structural issues, such as discussing bottleneck and market dominance, distinguishing between local loop operation, service provision and trunk network operation, and considering the building block approach to bottleneck services, as practised elsewhere (i.e. the unbundling of BT network cost components), were not covered in the report.

An issue related to OFTEL's work on accounting separation, is the control BT still has over the interconnect and access charges. Under an amendment to BT's license agreed in 1991, as part of the duple review, OFTEL (1994b) has issued a revision of the interconnect charges between BT and Mercury, requiring third operators to contribute to BT's access deficit (i.e. the compensation 'third operators' pay for BT's losses on its local networks). In certain conditions, for instance, new operators with market share less than 15 per cent, the payment of these access deficit contributions (ADC) could be waived. The establishment of an ADC waiver regime, would, according to OFTEL (1994b), lower barriers to entry in a market, until they have adequate opportunity to establish themselves in a post duopoly competitive market place this would require detailed regulatory intervention to require BT disentangling the cost allocations between its access, network and retail businesses and to publish separate accounts for them. The introduction of accounting separation between BT's local and long-distance services would force BT's retail business to pay the same interconnect and access deficit charges, as its competitors.

4.9 *Summary and Concluding Remarks*

From a distance the UK strategy for structural reform seems to be a great success, that has made the UK telecommunications market without any doubt one of the most dynamic and flexible in the world. Before 1969 telecommunications and postal services in Britain were provided by the Post Office, a government department that was subjected to the control of a minister (i.e. the Postmaster General), who was directly responsible to Parliament. The settlement of PO's budget was subject to the usual political procedures governing the overall public expenditures of the government without taking network or customer needs into account. After 1969, the Labour Government reconciled the need to give Post Office Management more corporate autonomy and flexibility by establishing it as a public corporation, while at the same time monitoring and controlling its decisions to ensure that the company operated in the public interest. In the early 1980s, the Thatcher government divided the Post Office into two separate corporations, the Post Office and British Telecom, and eventually introduced a far-reaching restructuring programme, based on liberalising the equipment and enhanced services market, privatising BT, installing a duopoly in infrastructure provision (BT and Mercury) and establishing a new independent regulatory regime (i.e. OFTEL). BT was formally separated from the Post Office and established as an independent but regulated entity. BT was privatised by the sale of a majority of its shares and its former administrative duties were taken over by the Department of Trade and Industry and the newly created OFTEL. The markets for terminal equipment and value-added services were liberalised, quickly followed by the opening up of the markets for mobile services and value-added networks. The regulatory setting of UK communications, however, was far from stable. From the creation of the regulatory regime in 1984 onwards, several issues has contributed to administrative uncertainty: the duopoly review, the Citizen's charter, the Retail Price Index-X review and proposals for transparent accounting make re-negotiation about the present governance structures necessary.

Competition in local communications was gradually encouraged by restricting market entry to BT and Mercury/C&W. The original purpose of the duopoly policy was to generate a kind of controlled competition between the network operators BT and Mercury on the one hand and telecommunications networks and cable systems on the other. Although the duopoly may have been successful in the proliferation of new services, cost-based and competitive tariffs for business and professional use and increasing the organisational and overall efficiency of UK telecommunications, the objective of fair competition between two operators and two infrastructure has not been reached. BT still dominated the market and cable-based competition turned out to be failure. After the review of this duopoly structure, the entry of new telecommunications operators was encouraged by allowing cable companies, mobile service providers, utilities etc. to penetrate the network services market. The two liberalised telephone administrations, BT and C&W, have transformed themselves successfully from rigid and hierarchical organisations into highly commercial and international operators, providing various telecommunications services all over the world.

The real winners from the privatisation and liberalisation of UK telecommunications have been the large business users, the shareholders (including the state), senior management of BT and the new market entrants. One important limitation on the introduction of genuine competition into the British telecommunications market was the integrated transfer of BT from public to private ownership, without an organisational divestiture, like what had happened in the USA. The decision to privatise BT as an integrated national unit was supported by the government, the merchant banks and BT management. The first two parties agreed to maximise the proceeds from the sale of BT-shares. BT-management was in favour of keeping its dominant position throughout the industry by minimising competitive threats to the company and a relatively light regulatory regime that would give BT as much discretion as possible. Other measures willingly or unwillingly limiting competition were the decision not to license any public networks operators other than BT and Mercury and the decision not to allow simple resale, at least until 1990. The liberalisation, privatisation and (re)regulation measures have turned out to be beneficial to large business users, BT and Mercury/C&W, and disadvantageous to households who are paying more for their local telephone calls. De-monopolisation has encouraged BT, Mercury and new operators to improve performance and increase efficiency and customer service; the efficiency gains, however, were not equally distributed. While large and international business users and residential customers in the urbanised South clearly benefited from competition, the large majority of people saw no substantial decrease of their local charges. Although its network has been curtailed and it has been subject to price control where the provision of basic services is concerned, BT has developed into the most successful European telecommunications operator, with record level profits (see table 4.1). Mercury/C&W has effectively penetrated the business market for international and domestic trunk services (it has largely stayed out of local residential communications), and effectively cut back BT's market shares to 72 per cent in international calls, 83 per cent in the domestic trunk market, and 95 % per cent in the local residential market (BT Annual Report 1994).[8]

The effect of the UK's liberalisation and privatisation strategy has been to open the door to multinational business users playing off one country against another and increasing the pressure to deregulate telecommunications elsewhere. Britain was the first country in Europe and so far the only one with such a drastic restructuring programme: BT has been privatised and significant liberalisation has occurred in the equipment and value added services market and the licensing of fixed, cellular and satellite networks. The presence of foreign (non-British) companies in British telecommunications (e.g. IBM, Siemens, Ericsson, RBOCs) is higher than anywhere else in Europe, where there is still - to varying degrees - a reluctance towards foreign (either EC or non-EC) penetration. There is, however, also another side to the coin. The drastic deregulation process allowed BT to diversify into equipment

8 The market share figures produced by OFTEL (1995) gave more or less the same picture: business public-switched voice telephony (PSTN): BT 79 per cent, Mercury 20 per cent; residential PSTN: BT 94 per cent, Mercury 4 per cent; and BT's market share in international traffic and business traffic in London: 80 per cent and 50 per cent respectively.

manufacturing (the take-over of Mitel and McCaw) and into alternative transmission modes by moving with relative success into cable, cellular radio, value-added services and global end-to-end services. While other PTT's were still concerned about their domestic and common European interests, BT and C&W were already joining AT&T and IBM as global carriers. They established a network of joint ventures with foreign local carriers in order to provide an integrated set of telecommunications facilities in the USA, Europe and the Far East.

The UK policy to make a distinction between the regulatory and the operational functions of the common carrier and the formation of a regulatory framework was taken over by the European Commission and has been implemented by the Member States of the European Community in the early 1990s. Also in terms of industrial regulation, Britain seems to have a competitive advantage over Continental Europe. The pro-competitive policies of the British government were part of a larger strategy to attract foreign investment and strengthen the domestic telecommunications and services industries in order to achieve market leadership in the emerging multi-media business. As formulated by the Department of Trade and Industry (DTI 1994: 16): *"The openness of the UK regime to inward investors has the important additional benefit of encouraging such investors to use the UK as a telecommunications hub to provide services throughout Europe as other markets become more liberalised. In addition, the established reputation of many British programme makers, publishers and information providers is a valuable asset. International business is already exploring the value of multimedia applications, with UK companies at the forefront."* The British government claimed, that a substantial part of transatlantic traffic was now routed via the UK (by BT and its contenders) and the City of London had effectively strengthened its competitive advantage as a major international centre for business services (facilitated by low-cost and high-quality communications packages).

5

The Liberalisation, Privatisation and Regulatory Reform of Telecommunications in the Netherlands: In Pursuit of a New Consensus?

5.1 *Introduction*

This chapter provides the second case study of a country responding to the changing technologies, markets and regulations in telecommunications. In adjusting their domestic industrial organisation to these structural changes, a small and open country such as the Netherlands, has to combine a strategy of international liberalisation with a stable compensation regime and unanimous decision making at home. Being much dependent on world markets, it cannot opt for protectionism or long term economic planning as adequate remedies to technological and economic restructuring. Instead small industrial countries are often forced to adjust to international economic developments by pursuing flexible and reactive strategies. In the domain of information technology the Netherlands is confronted with the *small country squeeze* (Van Tulder 1988,1991): smaller states are stuck between pressures from the larger industrialised economies, all involved in the active promotion of high technologies, and the newly industrialising countries capturing the lower ends of the market. Major economic developments take place beyond the reach of the smaller countries, that lack sufficient resources and economies of scale to participate in the global technology race. Large countries and multinational firms have started to dominate international decision making on standardisation, liberalisation, and techo-industrial innovation. The area of less complex technologies is increasingly dominated by developing countries from South-East Asia. So the freedom of action for smaller nation states is restricted to the diffusion and application of new technologies and to specific market niches.

In the Netherlands there has always been a tendency and a necessity to follow major international developments. In order to strengthen their economic position as a major European centre for international trade, transportation and financial services, the Dutch decided relatively early to evaluate their existing telecommunications policy. The radical strategy of the US government to deregulate and liberalise domestic telecommunications and to divest the Bell-system, and the British duopoly policy to privatise the public operator and to allow an alternative carrier in order to improve economic performance and establish effective competition, were regarded as too controversial and unfeasible to be implemented in the Dutch setting. Being the first on the European Continent to react to the drastic changes towards deregulating

telecommunications and privatising the public operator in the prime mover countries of the USA and the UK in the early 1980s, the Netherlands could be considered as *the first of the second mover countries*. The Dutch strategy showed a more balanced approach with its attempt to combine the liberalisation of the fringe markets of terminal equipment and value-added services with retaining a legal core monopoly for a privatised public operator. Just because the Dutch response has been relatively moderate, it has served as an exemplar for other European states (e.g. Germany, Belgium, Portugal) to restructure their domestic telecommunications industry (Wieland 1986; Foremann-Peck & Müller 1988; Arnbak 1989a; Noam 1992). Also the recent Dutch proposals to establish a duopoly of the incumbent KPN/PTT and a second fixed network operator, combining the power utilities, the national railway company and local cable operators, were closely followed in other parts of Europe. Initially, the European Community emulated the Dutch scenario of reorganising the former PTT by installing a separate competitive arm in addition to its public monopoly and divesting its regulatory from its operational activities. From the late 1980s onwards, however, the Commission prepared the ground for more radical changes, that went further than the modest reorganisation measures of the Netherlands, namely the opening up of other market segments to competition (e.g. satellite and cellular communications) and ensuring open network provision. This preference of the European Community and its member states for the Dutch moderate response to telecommunications restructuring could be seen as a strong desire for consensual decision making, not touching upon the fundamental interests of any of the parties involved.

In the formulation of an appropriate policy response to telecommunications restructuring, the Dutch policy style manifested itself by the utilisation of several ad-hoc advisory *Committees of Wise Men* to create sufficient political support for structural reform. In the country's political tradition, consultative committees have proven an effective and well-established instrument in forging a broad consensus about which strategy is to be followed. By bringing together political actors, independent experts and representatives of organised interests in advisory committees that put forward non-binding workable compromises, the government is relieved of the burden of the sole responsibility for taking conflictual and politically sensitive decisions. The new institutional structure for telecommunications in the Netherlands was prepared by the Swarttouw Committee (1981-82) and the Steenbergen Committee (1984-85). In 1989 the landscape changed significantly with the replacement of the 1904 Telegraph and Telephone Act by the enforcement of the new Telecommunications Act. The reform measures were aimed at opening up the markets for enhanced services and terminal equipment, while preserving the exclusive position of PTT with respect to the provision of the public infrastructure and the reserved transport services. The PTT administration was transformed from a government department to a state-owned limited liability company, that was eventually (partially) privatised in 1994.

Before discussing and assessing the traditional structure and changes in the Dutch telecommunications industry, we will examine the political and economic contingencies at the national level that might have had an impact on the policy

process. The sector's wider political and economic setting and the structural adjustment policies followed by the central government between 1980-1994, will be introduced in section 5.2 and 5.3, respectively. After this general introduction to the relevant institutional framework of the Dutch political economy, the focus will shift to the industry level, discussing the monopolisation and de-monopolisation tendencies in domestic telecommunications between 1881 and 1981. First the development leading to the establishment of a *de facto* public monopoly for PTT as the organisational form governing telecommunications in the Netherlands will be discussed (section 5.4). In the early 1980s a trend towards de-monopolisation became manifest in Dutch telecommunications eventually leading to the implementation of restrictions to the public monopoly, introducing moderate competition in the domestic market and reorganising the PTT administration (section 5.5). The processes of liberalisation, privatisation and regulatory reform are discussed in more detail in the sections 5.6, 5.7. and 5.8, respectively. The chapter will close with a brief summary and some concluding remarks on the major shifts in Dutch telecommunications policy (section 5.9).

5.2 *The Wider Political-Economic Setting of Dutch Telecommunications*

Before discussing and assessing the established structure and structural changes in telecommunications policy, we will examine the wider political and economic setting of the Dutch society. This institutional environment will be portrayed by a brief discussion of the following national variables, that characterise government-business relationships in the Netherlands: the production profile, the organisation of government, the system of interest intermediation, approaches to economic policy, and the Dutch economy's international dependence.

Production Profile

The Dutch have a small open economy of about 15 million people with a strong mercantile tradition, depending highly on international trade (especially with its Community partners Germany, Belgium, the UK and France). The high levels of exports and imports (about 60 % of GDP) illustrate both its openness and sensitivity to political and economic developments abroad (WRR 1993). The Dutch economy is strongly internationalised and concentrated, having a strong presence of incoming and outgoing multinational firms (De Jong & De Mare 1984). The small size of the home market has stimulated Dutch companies to enter foreign markets and encouraged the development of big (Anglo-)Dutch multinational companies such as Royal Dutch Shell, Unilever, Elsevier-Reed, Philips, DSM, AKZO, that dominate employment, R&D expenditures and the Amsterdam Stock Exchange. On the other hand, the openness of the economy has facilitated the entrance of foreign-based firms, that have gained a strong footing in the Dutch market. Foreign investors have been attracted by the country's ideal geographical location for distributive activities (a gateway to Europe) and favourable corporate tax conditions. The production profile of the economy is centred around a small set of key sectors: transportation and logistics, agri-business, chemical and refining industries, information-related services

(printing, publishing, banking and insurance) and electronics (e.g. the home base of Philips NV). The country is relatively weak in high-tech industries and labour-intensive manufacturing (i.e. office machinery, automobiles, defence-related equipment)(Jacobs et al. 1990; CPB 1992).

The share of public enterprise in the Netherlands, made up of state enterprises and state shares, has traditionally been small in comparison with countries like France, UK and Italy, where the central governments possessed substantial stakes in industrial and commercial enterprises, and banks (De Ru 1985; Andeweg 1989,1994). An economic reason for this small share can be found in the openness and small size of the Dutch economy, making it difficult to use public enterprise as an instrument to accomplish national economic objectives such as innovation and growth. An additional political explanation refers to the moderate attitude of the Social-Democrats towards nationalisation. Immediately after World War II they dropped nationalisation in favour of indicative planning and functional decentralisation (Andeweg 1988a, b). Apart from some minority state shares in the steel and chemicals/mining sectors (Hoogovens and DSM), public enterprise in the Netherlands has largely been restricted to the traditional public utilities (PTT, energy, railways, airlines etc.) and the Central Bank. As a rule government interference in the daily operations and long-term planning of public enterprise has been low. The main exception was PTT (and to a certain extent NS Dutch Rail), where the government actively intervened in decisions on tariff setting, wages, labour conditions, and investments.

Organisation of the State

The Netherlands could be typified as a decentralised unitary state, in which the government fosters self-regulation within the various groupings of society and facilitates nation-wide collaboration among these 'pillars' of society. Daalder (1966) conceived the Netherlands as a pacification democracy in which a basic acceptance of disagreement and diversity in the political community (*i.e.* respecting the various ideological traditions within society) goes together with a willingness to seek compromises between the political elites of the different societal groupings through slow negotiations and mutual concessions. The structuring of state-society relations in terms of societal self-organisation facilitated by the state was legitimised by the aversion of the Liberal-Conservatives to far-reaching state influence, the Christian-Democratic creed expressed by *the subsidiarity principle* and *sovereignty in one's own circle*, and the Social-Democratic support for functional decentralisation. Lijphart (1975) described policy making in the Netherlands as the *politics of accommodation*: de-politicisation (pragmatism), tolerance (agree to disagree), summit diplomacy, consensualism, secrecy, proportionality and a considerable degree of restraint on the part of parliament in its dealings with the government.[1]

1 The Dutch political system is an illustration of a consociational democracy, characterised by power sharing between the political majority and minority (grand coalitions), the dispersal of power (among executive and legislative, two legislative chambers and several minority parties), a fair distribution of

Since none of the political parties has ever enjoyed an absolute majority, coalition cabinets are inevitable. Over the years these coalitions have been dominated by the *catch-all party* of the Christian Democrats that, located in the centre of the political spectre, have alternated collaboration with the Social Democrats and the Liberal-Conservatives (De Beus *et al* 1989). Until 1994 the Dutch political system required the formation of cabinets, made up of changing coalitions of the Christian Democrats and either left or right-wing interests, hereby minimising the possibility of far-reaching U-turns. In the long run this political system has produced a large degree of continuity and coherence in public policy. Whether the coming to power of a new 'purple' Cabinet, consisting of Liberal-Conservatives, Liberal-Democrats and Social-Democrats (without Christian-democratic participation) in the Summer of 1994, will be a breakaway from compromise seeking to far-reaching policy shifts or a persistence of the incremental politics of the past, remains to be seen.

The Dutch style of policy making could be characterised as both corporatist, illuminating the participation of the major stakeholders and their systemic cooperation in the policy process, and technocratic, relying upon 'objective' investigations and prospective studies carried out by independent experts (Van Doorn 1981; Hemerijck 1994). The political system exhibits an interpenetration of the public and private sector through various tri-partite and consultative platforms, which play a crucial role in forging nation-wide compromises between central government and organised interests about social and economic policies (Van Putten 1982). There is also an important technocratic element in Dutch policy making, namely the influential role played by independent non-representational experts and (ad hoc) advisory committees. Whenever complex policy problems or politically sensitive issues feature on the agenda, the corporatist routines, based on interest articulation and organisational concertation, are often replaced by a 'de-politicised' approach, relying upon the involvement of technocrats and external advisory bodies. In that case the Government bypasses the normal political channels and consults independent 'insiders', recruited from the academic community, consultancy firms and industry, to evaluate the existing policies and formulate alternatives for the future.[2] Through this *institutional detour* problems are solved in a laborious collective search for a broad compromise that will be acceptable to all major stakeholders in the policy community. This way the discordant character of some difficult policy issues may be transferred away from lengthy discussions in Cabinet and Parliament towards secretive consultations and informal negotiations within standing or ad hoc advisory committees.

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power (proportional representation), the delegation of power (to territorially or non-territorially organised groups), and a formal limit on power (minority veto)(Lijphart 1984).

2 In the 1980s several official committees were appointed to investigate industrial restructuring and innovation: the Rathenau Committee (the socio-economic consequences of micro-electronics), the Wagner and Dekker Committees (industrial/technology policy), the Pannenborg Committee (public procurement) and the Swarttouw and Steenbergen Committees (telecommunication policy). All these advisory committees, named after their chairman, were chaired by (former) senior managers of the large home-based multinationals: Mr. Wagner (Royal Dutch Shell), Mr. Dekker, Mr. Rathenau and Mr. Pannenborg (Philips), Mr. Swarttouw (Fokker Aircraft) and Mr. Steenbergen (Aegon Insurance).

Although it may facilitate domestic stability and incremental adjustment, such an accommodationist regime, however, does have some drawbacks, such as conflict avoidance and lack of decisiveness at critical junctures. The Dutch political-administrative system, relying upon the convergence of interest between the state and representatives of civil society, runs the risk of becoming colonised by powerful private interests. A fragmented government administration, already suffering from interdepartmental frictions and lack of internal coordination, has found it difficult to reach agreements with private stakeholders on controversial issues. In those situations the policy process in the Netherlands seems to follow the *law of least societal resistance*, manifested by the time-consuming character of the search for inclusive compromises between public and private actors and the risk-aversive outcomes of collective bargaining (Geelhoed 1990). In case of major international and/or domestic challenges disrupting well-established patterns, the Dutch negotiated style has proven relatively ineffective and inefficient (Geelhoed 1989; Windmuller *et al* 1987). The Dutch reaction to the international economic recession of 1973-83, for instance, was characterised by slow responsiveness, lack of decisiveness, large decision and implementation costs, and policies favouring the established parties and preserving the status quo.

System of Interest Intermediation

The Netherlands is a social market economy, characterised by a large redistributional role for the government (i.e. a welfare state), a relatively small public corporate sector, an active involvement of organised business and labour in the formulation and implementation of socio-economic policies, and a 'power sharing' tradition, stressing the interdependence and interpenetration of public and private decision making. The governance of the national economy is considered the joint responsibility of government, employers and unions. The origins of this negotiated or corporatist framework lie in the post-war settlement between government, business and trade unions when class-wide consensus about industrialisation and wage moderation was considered essential to rebuilding the country. A neo-corporatist economy is characterised by the following three elements: a leading role for government in socio-economic policy making, centralisation of decision making within the peak associations of labour and business and an institutionalised system of concerted action and permanent bargaining between the government and recognised organised interests about the major macro-economic, industrial and social issues of public policy. The Dutch corporatist framework is made up of the following institutions (Windmuller *et al* 1987):

- the Socio-Economic Council SER: a tri-partite body with far-reaching advisory and executive powers in economic and industrial policy making[3];

[3] Originally the SER, comprised of an equal representation of management, labour and crown appointees (independent experts giving advice to the government), had the two-fold objective of governing the national economy and advising the central government on socio-economic policy. The goal of organising and guiding the industry through product and industry councils was never really put into practice and became obsolete (with the exception of agri-business). Between 1950-1975 the SER developed into the government's principal

- the Central Planning Bureau CPB: an advisory body preparing economic forecasts on the government's instruction and carrying out prospective studies;
- a Statutory Industrial Organisation PBO made up of product and industry councils with far-reaching competencies (only effectively implemented in the agri-business);
- the Foundation of Labour SvdA, a consultative body set up by the central employers and labour organisations to oversee, negotiate and coordinate wage controls and employment conditions;
- and a unitary conception of the company, manifested by collaborative relationships between management and labour through works councils (OR), the board of directors and the supervisory board, bearing a collective responsibility for the well-being of the corporation.

All these multi-layered corporatist institutions were relatively effective in a stable business environment of steady economic growth, facilitating gradual economic adjustments and a high-level of societal stability. In order to achieve an export-led growth in the post-war reconstruction period, the trade unions and employers associations had reached an agreement on wage restraint and avoidance of social conflicts in exchange for greater shop floor power and official workforce participation in macro-economic policy making at the national level. Since the 1970s, however, when the Dutch economy found itself in a crisis with low growth rates, a high collective burden and institutional rigidities, the quest for society-wide consensus on industrial relations has become a more difficult one.

The Dutch system favoured the active involvement of labour and employers organisations in public policy making. This made strong centralised associations of both workers and employers a prerequisite. There are two major federations of employers' organisations, the Federation of Dutch Industries VNO and the Dutch Christian Employers Union NCW, representing the large majority of employers. With some smaller employers associations, VNO and NCW work together in the Council of Central Employers Organisations RCO to coordinate the broad lines of socio-economic policies. Van Voorden (1984) has noted that the large home-based firms have a disproportionate influence on the internal functioning and the external strategy of these employers federations. The role of financial institutions in the system of interest intermediation can be typified by a merchant banking tradition, specialised in short-term credit provision and trade finance. Unlike Germany and France, where banks often act as long-term credit providers and/or major shareholders in large industrial holdings, the involvement of Dutch banks in corporate decision making is modest and their task limited to supporting the international commercial activities of domestic businesses.

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advisory body on industrial relations and macro-economic matters (Klamer 1990. On the basis of a statutory arrangement the Minister of Social Affairs could declare the main outcomes of collective bargaining as generally binding for all firms and workers within a given industry. The corporatist SER was supported in its task of bringing about consensus with regards to income/prices controls and labour market policy by the bi-partite consultative SvdA-body and the collaborative relationships between management and labour at the firm level.

The employee front is concentrated in one big trade union federation, the Dutch Federation of Trade Unions FNV and two smaller ones, the Christian Trade Union Federation CNV and the Federation of White-collar Employees MHP. FNV is by far the biggest employee organisation with 60 per cent of all union membership, leaving 20 and 7 per cent to CNV and MHP respectively. Although the total unionisation rate in the Netherlands is relatively low and falling (from 41 per cent 1977 to less than 25 per cent in 1990), its influence in the settlement of socio-economic matters must not be underestimated (Windmuller *et al. 1987;* Visser 1990). Because the three union federations are relatively centralised and exercise a remarkable control over their member unions (e.g. an extremely low level of industrial militancy), together with organised business they are an acceptable partner for government in macro-economic policy making. Both the unions and the employers' associations focus on interests beyond mere wages and labour conditions, they consider all social and economic aspects of the national economy their domain (price levels, unemployment, training, innovation etc.) The employers' associations and labour unions are affiliated with the dominant political parties. The denominational associations VNO and FNV, the first expressing clear pro-market and the second expressing pro-labour views, have been associated with the Liberal-Conservatives and the Social-Democrats respectively. The Christian associations, NCW and CNV, share a more harmonious view on industrial relations, closely linked to that of the Christian-democratic party.

Economic Culture and Ideology

Being a small and open economy, the Netherlands lacks the political and economic instruments to control or even influence major industrial developments. As a consequence, Dutch industrial policies are characterised by a virtual absence of ambitious high-technology projects. Instead, these policies seem to be more oriented towards the diffusion and adoption of new technologies and the manufacturing of medium/low tech products. Given the unfeasibility of protectionism and long term economic planning, small countries have to rely on export-oriented and free trade strategies, supported by collaboration between national producers and compensation schemes between the ruling political and socio-economic coalitions at home. Katzenstein (1985) has pointed out that the external economic flexibility and domestic political stability of small open economies are mutually contingent. In the Netherlands these conditions have fostered a business culture, characterised by concerted action on the part of the major interest associations and extensive negotiations in the formulation of socio-economic policies, together with the active promotion of exports and trade liberalisation abroad. The traditional encouragement of the accommodation of government, organised business and labour has facilitated the development of collaborative arrangements in the national economy, like a tolerant anti-trust policy and elaborate protective measures to restrict the influence of foreign and/or conflict-seeking shareholders on management decision making (Fortuyn *et al.* 1989).

De Jong (1990, 1992) has described the Netherlands when comparing the Dutch competition policy with that of other European countries as the *cartel paradise of Europe*. The 1956 Competition Act, hardly amended over the years, has left more

room for explicit and implicit collusion between firms and market dominance than the anti-trust legislation of the European Community. Unlike EC law, Dutch competition policy does not prohibit anti-competitive practices, but sets out to limit abuse of economic dominance and collusion in the market place. Furthermore, legislation on the scrutiny and control of mergers and acquisitions was absent. Competition legislation in the Netherlands is based on a case-by-case judicial review and the enforcement by law of privately conducted cartel-agreements. In practice anti-trust policy has often been subject to the more cooperation-oriented objectives of industrial and regional policy (Peeperkorn 1987). The reason for this clear preference for business self-regulation over competition policy can be found in the negotiated character of the Dutch economy, with its strong international economic dependence requiring the collaboration at home between business, state and labour but also within the rankings of organised business.[4] Until recently, there was no political desire to review domestic competition policy in the light of the more stringent EC rules, but that situation has changed. As a consequence of the recent attacks by the European Commission on the *cartel-friendliness* of their economy, the Dutch public and private authorities suddenly realised that a complete revision of the Competition Act was needed to align it to the prohibitive EC rulings. The Under-Minister for Economic Affairs Van Rooij (1992) announced that the Dutch *ex post* model of officially allowing cartel-like arrangements would be replaced by an *ex ante* regime of a more vigorous policy whereby cartels are no longer the rule but the exception. From 1992 onwards a series of anti-trust measures, referring to prohibitions on horizontal price agreements, market sharing agreements and transparent public procurement, have been effectively implemented.

Positioning in the International Political-economic System

The strong dependence of the Netherlands on the world economy has fostered a pro-European attitude and a major interest in the further integration of national markets into a free trade regime. Dutch foreign policy explicitly supports the broader goal of international cooperation through the creation of a web of international affiliations. It is believed that this would contribute both to world-wide security, stability and economic prosperity. The Dutch have always been strong advocates of European integration, being one of the six founding members of the EC and playing a relatively important role in the establishment of the common market and the move towards closer economic, monetary and political union. The Netherlands has developed a strong commercial interest in the EC with 77 per cent of its exports and 64 per cent of its imports being exchanged with its EC-partners in 1991 (WRR 1993). The economic gains from European integration have been high: agriculture, transportation and financial services and communications clearly have benefited from EC-policies (Wolters & Coffey 1990). Dutch policy makers, however, have seriously

4 Besides strengthening the position of domestic industry in foreign markets, also other factors contributed to the development of a cartel-friendly business culture in the Netherlands, such as the continuous fight against the water (i.e. a delta economy), the relatively late industrialisation of the country and the aftermath of the 1929-crisis and the reconstruction in the after-war period (Zahn 1984; De Hen 1980; De Jong 1990).

underestimated the consequences of increasing European integration on domestic socio-economic policies (Van Schendelen 1991,1993b; BiZa 1993). The rapid implementation of the Single Market Programme by 1993 and the concomitant irreversible shift of decision making powers towards the European level took most Dutch ministries and key industries by surprise. The EC had simply been regarded as a large market outlet, rather than an institution in its own right with substantial powers to constrain the political and economic manoeuvrability of its member states. Since 1988, the Dutch authorities have shown a clear interest in the consequences of European integration: public and private policy makers have become more aware of the significance of the draft phase of negotiations and the need to anticipate the final phase of decision making. In 1990 the Lubbers II Cabinet stated that the representation of Dutch interests in Brussels needed to be improved by demanding better coordination between the national government and business (EZ 1990). In the Netherlands, the harmonisation of national policies to form one common policy and the enactment of guidelines, regulations and directives in order to establish the Common Market were widely regarded as major consequences of European integration. The fact that the Internal Market programme also instigated a process of international deregulation and policy competition between the national institutional frameworks was, however, underestimated. The emphasis of the Dutch political debate had been too much on the process towards European policy convergence, overlooking the fact that not only European businesses, but also governments are competing against each other for capital, labour and technology (WRR 1993). In such a market environment the member states could optimise their comparative advantages by encouraging entrepreneurship, improving the quality of the industrial and educational infrastructure, and strengthening other competitive factor conditions. In order to make the Dutch business environment more attractive to domestic and foreign investors, the Ministry of Economic Affairs (EZ 1993) suggested the following measures: a reshuffle of the government's budget (by reducing the public deficit and collective burden, and increasing infrastructural investments), the promotion of labour market flexibility and overall deregulation, and a revision of competition policy.

5.3 *The Politics of Economic Adjustment in the Netherlands (1981 - 1994)*

Between 1945-73 a broad consensus existed in the Netherlands about Keynesian demand management. Government, business, and labour had committed themselves to the national goals of full employment, steady economic growth and the development of the welfare state. Important instruments to accomplish these objectives were legally enforced price controls and a centrally guided wage policy to keep the domestic production costs significantly lower than its foreign competitors and advance the country's trading position. This successful reconstruction and industrialisation strategy in the post-war period has become known as *le Miracle Hollandais* (Van Den Brink 1984). When economic growth started to stagnate in the early 1970s, the thus far collaborative relationships between state, business and labour and within the ranks of organised labour and business became more polarised. The delicate balance between economic adjustment and political stability was

effectively challenged. The sharp increase of wages and the drop of profits in the late 1960s encouraged business to modernise traditional industries (i.e. investing in labour-saving techniques) or shut down plants and move economic activities abroad. As a consequence the established corporatist framework was replaced by 'many little corporatisms' in which negotiations between organised interests and state agencies were decentralised and increasingly located at industry and firm level (Visser 1990).

In the 1970s there was a move *from low to high politicisation of business* in the Netherlands (Van Schendelen 1987a). The centre-left Den Uyl Cabinet (1973-77), with its slogan *for a fair distribution of knowledge, power and income,* put forward an ambitious programme to increase government spending on social welfare and social security, housing and education and to curtail the power of business by proposing measures to increase workers' involvement in corporate decision making.[5] The country, already suffering from decreasing economic growth, was hit hard by the oil crises of 1973 and 1978. The situation became even worse as a consequence of the so-called Dutch disease: the windfall profits of the production and export of natural gas were not used to strengthen the country's competitiveness and economic structure, but were utilised for public consumption and the expansion of the welfare system. The bonanza of gas revenues made the inflation rate and the value of the guilder go up, eventually leading to a deteriorating competitive position in the world market. At the end of the 1970s the Dutch economy was confronted with increasing international competition and a shrinking economy, characterised by lagging investments, de-industrialisation, decreasing exports, increasing imports and a huge budget deficit (WRR 1980). An urgent need was felt to trim the welfare state with its high taxation and social security payments and to promote economic growth. The centre-right Van Agt I Cabinet (1977-81) started to abandon Keynesian policies in favour of neo-liberal alternatives by promoting (minor) cutbacks in public spending and a more positive appraisal of market principles. The implementation of these austerity measures did not go far enough to cope with the economic situation, however. In 1983/84 the unemployment rate rose to a record level of about 15 per cent and public spending to 70 % of GDP (Windmuller *et al.* 1987). Between 1977-83 the Dutch economy found itself in a crisis situation: the centre-right government still gave priority to the objectives of full employment and welfare state programmes above flexible adjustment policies; the social democrats did not offer a viable alternative; trade unions were losing members and internal coherence; and tensions in collective bargaining between labour and management were increasing. The decision of the centre-right Lubbers I Cabinet to impose a 3.5 per cent cut on civil servants salaries for 1984 triggered the biggest-ever strike of civil servants (including PTT staff) since the great railway strike of 1903 (Van Den Besselaar & Visser 1993). After being confronted with a negative public opinion and losing numerous law suits, the public sector unions accepted a 3 per cent salary cut.

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5 In a famous letter to the Den Uyl Cabinet and Parliament the presidents of nine leading Dutch multinationals strongly criticised these 'more state less market' policies, claiming that these proposals would frustrate free enterprise and undermine the investment climate in the Netherlands (Van Den Brink 1984). The captains of industry argued that the national economy, already constrained by a high collective burden, labour market rigidities and overregulation, would eventually loose its international competitive advantage.

The established corporatist framework hampered the formation of an adequate policy response to the new international and economic conditions. After a short interval of the centre left cabinet Van Agt II (1981-82), the centre-right Lubbers Cabinets (1981-85 & 1985-88) pursued no-nonsense polices aimed at restoring investment and economic growth, reducing unemployment and maintaining price levels. Only then did the Dutch economy begin to show signs of economic recovery. To paraphrase the cliché of the Netherlands as *a country of merchants and preachers*, one could say that after 1981 the missionary work to expand the welfare state was replaced by the more pragmatic objectives to promote business and revive the economy (Zahn 1984; Van den Brink 1984). Another reason for the country's economic revival was the general upswing in the world economy throughout the 1980s. The major shift in economic policy making took place between 1981-83 when the foundation was laid for the revival of Dutch industry and trade. The effective remedies consisted of a mix of cutbacks in public spending, wage moderation, a market orientation towards the labour market and business in general and the active promotion of innovation policy. The steady flow of large government subsidies for investments to ailing industries (and other domains such as culture and housing) was cut dramatically: partly as a deliberate consequence of balancing the budget by the centre-right Lubbers Cabinet but also due to misuse of public funds (e.g. shipbuilding). This package of measures proved effective over the years: it stimulated economic growth and cut back unemployment and the budget deficit (with inflation remaining low). In the carrying out of this effective economic adjustment policy, three events were influential:

- the creation of a Committee of Experts on Industrial Policy to propose an adequate remedy to combat the recession;
- the Central Agreement between organised labour and business regarding voluntary wage moderation in order to create jobs and advance the profitability and investments of firms;
- the Reconsideration programme to examine deregulation and the withdrawal of the state from certain areas of public policy.

In its Re-industrialisation Report of 1980, the Scientific Council for Government Policy drew attention to the weak industrial and technological base of Dutch business (WRR 1980). Besides the cutback of welfare spending and subsidies to ailing businesses and the pursuit of wage restraint policies, the Council argued for anticipatory sectoral policies, based on picking the winners and setting priorities for every key industry, upgrading manufacturing and promoting promising areas of economic activity. The task of restructuring traditional industries and promoting growth sectors would be embedded in an interventionist multi-layered framework, consisting of a Government Commission, various Sectoral Commissions and a National Development Agency. The Reindustrialisation Report was received with mixed feelings by the government. Although it supported the proposals to cut back welfare spending and follow wage restraint policies, the centre-right Cabinet opposed the Report's planning notions. Instead the Cabinet favoured market-oriented solutions to combat the economic crisis and restore business profits. The Government therefore

suggested a follow-up study, to be conducted by independent experts, to develop another economic strategy for the future. The Advisory Committee on Industrial Policy comprised of senior business managers, politicians, academics and union leaders, chaired by Mr. Wagner (the former President of Royal Dutch Shell). In its Report *Towards a New Industrial Elan* and the succeeding progress report on the implementation, the Committee suggested minimal interference with the market (except for general tax rebates and investment premiums), and a reduction in public spending (Adviescommissie 1981,1984). The Committee recommended macro-economic measures (controlling labour costs), labour market flexibility, industrial restructuring (reducing subsidy schemes to the ailing industries and strengthening the competitive position of domestic manufacturing) and innovation policies (the promotion of sunrise industries such as electronics and informatics).

The austerity policy of the Lubbers Government was reinforced by the agreement between business and labour in the Foundation of Labour SvdA (instigated under pressure from the government) regarding continued wage moderation and the voluntary decentralisation of collective bargaining. From that moment onwards, organised business gradually took over the initiative from labour to set wages and other employment conditions. In 1981/82 the Lubbers I Cabinet implemented an ambitious programme, called the Major Operations, to facilitate a structural reform of the public administration and a retreat of the state. The Major Operations consisted of the following sub-programmes: a reconsideration of public expenditures, a reorganisation and decentralisation of the government administration, deregulation, de-bureaucratisation (cuts in civil service salaries and/or staff) and privatisation. The Reconsideration programme was aimed at cutting back the then sky-high government deficit and improving the public administration's efficiency and effectiveness (Van Nispen & Noordhoek 1986). Deregulation was perceived as the remedy to cut back extensive and ineffective legislation. The reorganisation of the central bureaucracy was another target of the successive Lubbers' Cabinets. In 1980 the Committee on Administrative Reform (Commissie Vonhoff 1980) had already given a number of recommendations on how to decentralise government by reducing the number of redundant external advisory bodies and transferring central tasks to lower public authorities. In the 1980s the government followed the Committee's recommendations by aspiring to reduce the top-heavy central administration and make the relationships between government and society more transparent.

Privatisation became another instrument in redefining the boundaries between public and private sector. The Dutch privatisation programme had no explicit ideological motivation: unlike the UK the notions of mass public shareholdings, popular capitalism and free market doctrines were not regarded as important elements in the discussion. De-nationalisation was considered just another pragmatic instrument to economise on the state budget and to strengthen the market sector. Officially, the objectives were to reorganise the public bureaucracy and improve efficiency within government, to reduce public expenditure and the budget deficit and to stimulate entrepreneurship and market-responsiveness to economic revitalisation (De Ru 1988b; Andeweg 1988,1989,1994). The budgetary motive to trim the public sector was prevalent in the privatisation programme and the Treasury

was the driving force in implementing it. The final results were somehow disappointing: there were hardly any state enterprises that could be privatised and the operation was carried out gradually without a clear mission. First, although characterised by a large public sector, the Dutch economy has only a small number of state enterprises that could possibly be privatised. The explanation for this paradoxical phenomenon can be found in the availability of a large non-profit sector, in which private associations, performing public tasks in health care, education, social welfare and social security, are subsidised by the state. Leaving aside the hiving off of some smaller state-owned services, only two larger companies were privatised between 1981 and 1994, namely KPN/PTT (the biggest corporate employer in the country with about 100,000 employees) and the Postbank (a former PTT subsidiary with about 10,000 staff). Secondly, the Dutch government showed a clear preference for reorganising the public sector by retaining the core competencies of policy making and by privatising in a gradual way. The policy makers so far have opted for a pragmatic approach by converting the government department into a state-owned company that would operate autonomously from the government, to be followed sooner or later by the sale of the government's shareholdings. A clear priority was given then to the goal of internal preservation and reorganisation of the (former) state enterprise, hereby underestimating the new roles and responsibilities of the privatised company, the government and (potential) competitors in the changing business environment.

Notwithstanding the sale of some shareholdings by the state (notably KLM, DSM, Hoogovens, ING/NMB Postbank, Volvo Car and Fokker Aircraft) and the contracting out of certain auxiliary services (e.g. catering, security, maintenance), a far-reaching and irrevocable decision to sell public utilities and/or state-owned companies could not be made in a consensus-oriented country such as the Netherlands. The Dutch way of privatisation is characterised by a two-staged approach, emphasising an incremental adjustment of the public enterprise to the new market conditions and avoiding the radical option of selling a majority of the state assets immediately. As a first step, state enterprises are restructured and brought under private law, without touching upon ownership and market conditions. Next, the independent state-owned company is given some breathing space to become a market-driven corporation, before (some of) its shareholdings are sold off by the government (its single shareholder). The employment levels of civil servants and the interests of the newly established corporation are protected as much as possible to overcome the employees' resistance to change. At the same time the former civil servants and the autonomous state-owned company are prepared for the market environment, and the legislative framework is developed and implemented. This transitional period of *pseudo-privatisation* helps to improve the value of a private share offering by enabling the operator to become more efficient and allowing it time and space to restructure its business activities effectively, sheltered from disruptive market forces (De Ru 1992). This is what happened with the chemical company DSM, the Postbank, and KPN/PTT. The recent restructuring of the public utilities has been dominated by the reorganisation of its sectoral champions, namely KPN/PTT, NS Dutch Rail and the power utilities, that have been given more managerial and

financial autonomy by converting them into state-owned companies with a limited liability status. As a consequence, regulatory issues to be negotiated and settled at the industry level, like universal service requirements, consumer protection, interconnectivity, equal market access, and fair competition, played a minor role in the political process.

Privatisation met only little political opposition and legal-constitutional problems were only minor. The pragmatic aspects of the privatisation proposals prevented political opposition, only the small radical left wing parties were against them. The Christian-Democrats, the Liberal-Conservatives and the centre-left D66 were cautiously in favour and the main opposition party of the 1980s, the Social-Democratic PvdA, in principal was not against the proposals. The privatisation programme was opposed by the civil servants unions. They saw the privatisation programme as just an excuse for restructuring an inefficient and ineffective civil service, fearing losses of jobs, income and pension rights (Andeweg 1994). The public sector unions (with a unionisation rate of about 50 per cent) argued that alternatives like decentralisation and industrial democracy were more appropriate to making the civil service and public management more flexible (Soeterbroek & Walravens 1985). When their rank and file did not whole-heartedly support these views, the public sector unions became more moderate and cooperative. If particular labour conditions, such as job security, payments and social security (such as the breach in pension schemes) were safeguarded, the civil servants themselves were not necessarily against privatisation. Furthermore, the two major labour union federations FNV and CNV did not support their civil service unions very strongly. Privatisation did not have an influence on their total unionisation rate. It only implied a (possible) transfer of members from public sector to private sector unions. The employers' associations regarded the sale of government shares and the contracting out of public services as belonging to an overall market-oriented economic policy aimed at stimulating the business spirit and encouraging market forces. The largest employers' organisation VNO (1982) was certainly in favour of privatisation and deregulation: it argued that there could be no *industrial elan* in Dutch business without sufficient room to move.

The Dutch path throughout the 1980s was aimed at creating more flexibility in the national economy by non-consensual programmes, like an austerity policy, decentralised bargaining, deregulation, administrative reform and the privatisation of the Postbank and KPN/PTT. After seven years of centre-right government, in 1989, the pendulum once more swung to the other side of the political spectre with the centre-left Lubbers III Cabinet, that went ahead with the difficult tasks of trimming the welfare state and establishing a smaller and more effective public sector. The levels of unemployment, government expenditures and the budget deficit were reduced, but they were still comparatively high (e.g. unemployment about 8 % and public expenditures of 51 % of GDP in 1991)(WRR 1993). Although the civil service workforce was reduced by about 20,000 between 1986-93, the problems already investigated by the 1980 Committee on Administrative Reform were not really solved over the years. The Dutch government administration, rather moderate in size compared to other European states, is still regarded as relatively inappropriate to

cope with the constraints posed by international deregulation and market competition (BiZa 1993). The policy process focuses too much on the feasibility and acceptability of alternatives, hereby overlooking flexible decision-making procedures and innovative programmes that challenge laborious consensus-seeking and disturb the status quo. To remedy that, some measures were put forward to improve the efficiency and effectiveness of the government administration: a separation between policy formulation and implementation by the creation of semi-independent administrative agencies to deal with executive and regulatory tasks, territorial decentralisation and policy reduction on some policy fields. The installation of the 'purple' Kok Cabinet in the Summer of 1994, consisting of Liberal-Conservatives, Liberal-Democrats and Social-Democrats, so far did not lead to big change in public policy. Emphasis is still put on balancing public expenditures to reduce social security costs and promote public investments and increasing higher participation levels in the labour market by the implementation of deregulatory measures.

In the 1980s, the Dutch adjustment strategy to combat the economic crisis shifted from corporatist consensus making to more flexible coordination mechanisms by relying upon the participation of independent experts and ad hoc advisory committees, bilateral agreements of the two social partners to decentralise collective bargaining, and a 'no-nonsense' approach to government intervention in the economy through zero-base budgeting and privatisation. Although less dominant and persistent than before, corporatist structures and tri-partite agreements have not disappeared over the years, however (Hemerijck 1994). Until today, organised business and labour still attempt to reach common views on more narrowly defined subjects such as pensions, indexation, shorter hours of work etc. Recently, tri-partite negotiations have been put forward as an appropriate policy instrument to cope with the challenge of international market and policy competition and to bring the Dutch economy up to the standards of the Economic and Monetary Union by the end of the decade (SER 1992; CPB 1992). It remains to be seen whether this proposal to breathe new life into the corporatist framework by re-creating a nation-wide base for decision making about the development of appropriate adjustment policies is feasible within an internationalising context. The globalisation of business, European integration, and the privatisation of the public sector will certainly reduce the scope and range of institutional bargaining and the nation's manoeuvrability. Nevertheless, the corporatist framework may still be appropriate for adequate and responsive strategies on certain aspects of macro-economic policy and for the implementation of EC-policies.

5.4 *Monopolisation of Telecommunications in the Netherlands (1881-1980)*

Introduction

Until 1989, the Dutch PTT was part of the government administration as a corporate unit of the Department of Transport and Public Works, called *Staatsbedrijf der Posterijen, Telegrafie en Telefonie.* Traditionally the PTT Directorate was subordinate to the Minister of Transport & Public Works (T&PW) and subject to parliamentary supervision. The PTT administration was assigned a de facto public

monopoly on the control of the postal and telecommunications infrastructure (including the responsibility for broadcasting transmission) and the operation of message transportation services. The Director General of PTT (DG) was granted certain administrative powers related to the control of the infrastructure, such as granting licenses for private networks and cable systems, allocating frequencies, standardising and approving terminal equipment. The PTT administration was also involved on behalf of the Minister in policy formation and implementation. Due to a lack of expertise on the part of the government, postal and telecommunications policies were often prepared and ghost-written by PTT officials. The Advisory PTT Council (*PTT-Raad*) served as a consultative platform, through which the PTT and its major stakeholders could discuss the social, political and economic aspects of postal and telecommunications policy. Besides facilitating the exchange of information and views among the parties involved, this neo-corporatist body, whose secretarial functions were carried out by the PTT administration, was also required to give recommendations to the Minister of T&PW. The system of industrial relations within PTT consisted of a Departmental Works Council at the central level and 200 subdepartmental committees at the lower ranks (Visser & Van Den Besselaar 1993). The prominent labour union, representing PTT staff (a unionisation rate of nearly 50 per cent), was the centre-left AbvaKabo, a public sector union loosely connected to the Social-Democratic party. Besides the operation of postal and telecommunications services, the PTT administration was also responsible for providing money services to the general public (notably giro and savings) through its branches of the Postal Savings Bank RPS and the Postal Giro Bank PCGD. In 1986 the money services were integrated into the state-owned *Postbank* company and hived off from the PTT administration.[6]

The PTT administration was subject to close political intervention with respect to its day-to-day operations and strategic investments, that often were *'intensive, complicated, rather incoherent and very detailed'*[7] (Commissie Steenbergen 1985: 25). All the financial requirements of the PTT had to be met through the National Budget: the allocation of its resources was decided on a year-to-year basis by the government and agreed upon by Parliament. Given the fact that its profits and corporate financing were government-controlled, PTT therefore had to rely upon internal financing and the cross-subsidisation between the profitable Telecommunications Function and the loss-making Postal Function. The PTT administration was regularly used as a fiscal instrument to balance the budget. As a consequence, its long-term strategy was seriously hampered by short-term budgetary

6 Between 1989-93 the corporatisation of the Postbank was followed by a real privatisation through which full state ownership of the shares was gradually phased out. First the Postbank merged with the partially state-owned NMB bank to create the NMB Postbank Groep, then the newly created holding company linked up with the insurance company Nationale Nederlanden, hereby creating the financial conglomerate ING (Halsink 1995).

7 The debates in Parliament about the allocation of the PTT-budget were often meticulous with details and short-term political interests, prevailing over longer term PTT concerns: *"The presentation of the PTT budget causes parliament to embark upon debates concerning not only management policy, but also details such as the size of outdoor letter-boxes and interior decorations in post offices (De Ru 1985: 321)."*

concerns, often leading to its charges being raised with the explicit purpose of increasing the financial contribution to the Treasury and postponing investments. The Home Office, in charge of stipulating the recruitment and employment conditions within the civil service, set clear limits on PTT's personnel policy. The task of rate setting also fell under the government's jurisdiction. Tariff changes were proposed by the Ministry of T&PW, in close collaboration with the Ministry of Economic Affairs and the Treasury, and finally agreed upon by Parliament. In addition to being responsible for tariff policy, the Ministry of Economic Affairs used the PTT administration to further industrial policy objectives, notably the promotion of innovation and regional economic development. The Ministry for Welfare, Health and Culture had to be consulted in all telecommunications matters, related to cable television and media policy.

The contradictory role PTT played in public policy was brought to a head by two events in the 1960s and 1970s, that clearly reinforced PTT in its search for more corporate autonomy, namely the plan of the government to decentralise the civil service and the quest for control over the emerging cable tv-networks. The first illustration of the special position PTT occupied in public policy was that it was forced to move parts of its central management (about 3000 jobs) to the city of Groningen located in the North-east of the country in 1976. This measure was part of a regional development policy, put forward by the then centre-left Den Uyl Cabinet, to transfer sections of the Civil Service from the *Randstad* to the underdeveloped Northern, Eastern and Southern parts of the country. PTT, supported by the Advisory PTT Council, felt that the government used the corporation as a means to achieve objectives that had little to do with telecommunications and postal policy, namely regional economic policy (PTT & PTT-Raad Annual Report 1976-88). The imposed transfer of parts of the PTT headquarters to the North-east was interpreted as an undesirable interference in its corporate management, that would seriously hinder public service provision. Furthermore PTT-personnel and its labour unions objected strongly to the obligatory character of the plan, implying that some servants were forced to move to another part of the country (AbvaKabo 1981). Bypassing the interests of PTT, the Cabinet finally enacted the decision to transfer parts of the headquarters in 1985 and the whole operation was completed in 1992.

Between 1965-75 a political discussion took place about PTT's ambition to extend its telephone monopoly into cable-tv distribution; also known as the CAS-plan. In the early sixties, PTT had started to adapt its existing wire broadcasting network to a system of communal aerials that could eventually be integrated into a nation-wide cable infrastructure. For practical reasons and only temporarily, PTT tolerated small collective aerials, operated by landlords, housing associations and municipalities. At first the government welcomed the plan to integrate communal aerial systems into a PTT-controlled infrastructure and thus extend its public telecommunications monopoly to include cable systems as well. The installation and operation of cable networks under PTT control would have significant advantages over a panoply of different cable systems governed by numerous local authorities. This would contribute to economies of scale, put an end to the *jungle of rooftop aerials* and improve signal reception. In 1969, the 1904 Telegraph and Telephone Act was

amended to facilitate the enlargement of its public monopoly. The CAS-plan, however, was strongly opposed by municipal authorities who considered utilising their cable systems for local broadcasting purposes and wanted to have a say in selecting and tariffing programme distribution (Hins 1991). The suggestion of state control (through PTT) in programming matters was an important reason for the PTT-plan failing to receive sufficient political support (Schrijver 1983). The involvement of municipal authorities in the control and operation of cable networks was even legalised when they had discovered that the 1969 legislative amendment offered them an opportunity to block the PTT plan.

The formulation that the PTT monopoly did not apply to *'cable systems of a small size or special character'*, originally intended to regulate exceptional cases, proved to be a loophole in the legislative framework (Hins & Hugenholtz 1988; Hins 1991). The municipalities successfully argued for a broad interpretation of the *small size* concept and hence claimed that control over these cable networks was a local affair lying within their jurisdiction. In 1970 the Minister of T&PW issued a decree, stating that the overall PTT monopoly over the telecommunications infrastructure did not apply to collective aerials and local cable networks (restricted within the boundaries of the municipality). The new measure implied that local authorities had preferential rights and therefore should be granted a license from PTT's Director General to install and operate cable systems if certain technical requirements were met. The municipalities could delegate the actual operation of these cable television networks to local/regional public utilities or private companies. PTT had already anticipated the new ruling that local cable networks were no longer part of its public monopoly and established a separate company, called Casema, that would be in charge of constructing and operating cable networks. The plan for a nation-wide cable network to be controlled by PTT/Casema was definitely dropped in the 1974 *White Paper on Cable Networks* (TK 1974/75: 13354). Although it had lost substantial control over the local cable networks, PTT remained influential in the cable sector through its subsidiary Casema, operating some important cable networks on behalf of municipal authorities. In the 1970s and 1980s Casema substantially enlarged its market share by acquiring several other cable networks.

Traditionally the market for public switching equipment has been relatively closed: with the major supplier being Philips and the foreign companies ITT/NSEM (USA), Ericsson (Sweden) and Siemens (Germany) being additional suppliers. Philips was the country's largest industrial employer and one of the world's largest diversified electronics firms. The relationships between PTT, Philips and the Technical Universities of Delft and Eindhoven were close, and a frequent exchange of information, personnel and funds took place. With respect to switching equipment Philips, forced by its relatively small share in the world market and lack of technological competitiveness, decided to change its corporate strategy by leaving the national champion alternative for a more collaborative strategy. In 1983 Philips Telecommunications decided to catch up by joining forces with AT&T through the creation of APT: this link up with an American company was going against the ideals of establishing a common European technological base and a Common Market, in which Philips was so much involved at that time. For AT&T the agreement was a

bridgehead on the highly protected European market, quickly followed by partnerships with Olivetti, Italtel and Telefonica. For Philips, APT turned out to be a disappointment and it gradually shed its shares, eventually leading to a clear take-over of APT by AT&T when Philips sold the remainder of its shares in 1990. After its withdrawal from the public switching market Philips has become into a niche player in the telecommunications market (business exchanges, mobile systems and radio facilities).

The Formative Years of the PTT Monopoly (1881-1945)

Initially, telephone systems in the Netherlands were developed and controlled by private enterprise. Involvement of municipal authorities and the state in the exploitation of local, trunk and international networks quickly followed. In 1880 a 15-year franchise to establish a local telephone network in Amsterdam was granted to the *Nederlandsche Bell Telephoon Maatschappij* NBTM, that began operating the service one year later. The number of licenses granted to private companies to install and exploit local and trunk networks increased rapidly, leading to a steady expansion of the telephone network at the end of the 19th century. At that time telephony was not regarded as a threat to the nation-wide interests of the state-controlled *Rijkstelegraaf* (originally established in 1870), but as a local and functional addition to telegraphy. Although the telegraph authorities saw telephony (or 'voice telegraphy') as part of their statutory monopoly as laid down in the 1852 Telegraph Act, they did not oppose the government's decision to grant franchises to third parties for a transitional period. From 1896 onwards when most licenses were due to expire, the majority of the municipalities took over the responsibility from private telephone companies to operate local networks. A major reason for the *municipalisation* of public telephony were the excessive charges levied by the local monopolists. The interconnection of local networks into trunk systems and the expansion into cross-border connections at the end of the century, challenged the notion of telephony as a functional extension of telegraphy and telephony was increasingly seen as a serious contender of the vested interests of the *Rijkstelegraaf*. Consequently the central government became more directly involved in public telephony by merging the *Rijkstelegraaf* with the Postal Services (granted with a statutory monopoly since 1799) leading to the creation of a Department of Postal and Telegraph Services in 1886. The international telephone service was brought under state control in 1895, followed two years later by the nationalisation of trunk telephony.

The Telegraph and Telephone T&T Act of 1904, replacing the 1852 Telegraph Act, combined the recognition of a license-based system to run public networks with a nationalisation clause to bring local networks under governmental control. The 1904 Act stipulated that the provision of telephone services was exclusively reserved to the Crown, although the government could grant licenses to third parties to install and operate local networks. The PTT Designation Act 1915 established PTT as a government department with a budget that was relatively independent from the Ministry's estimated revenues and expenses. This PTT administration was designated to operate the telephone and telegraph services on behalf of the state, but at the same

time in subordination to the responsible Minister and subject to budgetary legislation and detailed parliamentary supervision. The next step towards establishing a public monopoly was the take-over of municipal telephone companies. Because the licenses given to municipal companies were still in force, it took some time before PTT was granted a nation-wide concession for the exclusive provision of public telephony. The process of nationalisation was slowed down further when the government lacked the financial resources to acquire the various local networks at once and because there was serious opposition from the bigger municipalities to sell their often very profitable networks. With the exception of the local networks of Amsterdam, Rotterdam and The Hague, PTT had established a monopoly. With trunk and international telephony under state control, the nationalisation of Dutch telecommunications was completed with the involuntary take-over of the last three municipal networks by the state under German occupation in 1940.

After World War I PTT management began to organise its postal and telecommunications services in a more business-like way. The plans of PTT to increase its powers, however, were opposed by government and parliament, who argued that PTT should remain under direct state control. In 1920 an official Advisory Commission was established to link PTT closer to its environment by organising regular consultations between PTT, Parliament, and trade and industry representatives. Although the initiative came to nothing, it strengthened PTT in the belief that the structure of a departmental organisation and detailed governmental and parliamentary interference obstructed the proper functioning of its business. In 1925 a government-installed advisory committee suggested the installation of a semi-independent supervisory and consultative body to counteract and even replace ministerial responsibility and Parliamentary oversight (Commissie 1925). These recommendations to allow PTT more administrative and financial autonomy from the government, however, received insufficient political support. A moderate version of the proposal was implemented in 1927 with the installation of the Postal Council, succeeding the relatively ineffective Advisory Commission. The Postal Council, that would operate separately from PTT and Parliament, was entrusted with the two-fold task of supervising PTT in a general way and mediating between PTT and its customers. The revision of the PTT Designation Act in 1928 cleared away some of the hindrances concerning bookkeeping and budgeting, without giving PTT any autonomy in financial and commercial matters. PTT put forward a strong demand for a legal entity status, as that would allow it to borrow on the capital market, build up financial reserves and thus reduce political interference. In 1941, under German occupation, PTT was modelled after the *Reichspost* and was finally given a legal basis. Although its personnel kept the civil servant status, PTT was put at arm's length from government in financial matters.

The Prolongation of State Control over Telecommunications & PTT (1945-1981)

After the Second World War government and parliament strongly supported the idea of re-installing the tight financial and political controls over PTT. In the post-war period, the decision to give PTT a separate legal status, strongly favoured and supported by PTT, was not enforced. A majority in Parliament was unwilling to

reduce the budgetary powers of the Treasury and Parliament in the allocation of national resources. The results and investments of PTT were regarded as belonging to the overall revenues and expenditures of the state; in the words of one MP: *'the PTT-administration should not be allowed to be an island of prosperity in the sea of misery of our National Budget* (quoted in Hogesteeger 1989: 284).' In 1954, PTT lost its legal entity status and, like in the pre-war period, became incorporated in the government administration on the basis of the Act on the revised PTT Designation Act. Although the 1904 T&T Act left room for more than one operator, the government assigned PTT to provide telephone and telegraph services exclusively. Without having a statutory monopoly, PTT was granted a *de facto* monopoly in Dutch telecommunications. The Postal Council was replaced by the Advisory PTT-Council, supported by advisory PTT Chambers at the regional level. These consultative bodies were required to give recommendations to the Ministry of T&PW on fundamental policy matters, to advise the DG PTT with respect to the introduction of new services and to represent the interests of the various stakeholders in its task environment (business and residential users, unions, employers and the equipment industry). When restoring and expanding the telecommunications network in the post-war years, PTT-management became more and more convinced that the tight political controls on tariff setting and the prohibition on negotiating loans on the capital market were at odds with the goal of fulfilling its corporate and public functions. The lack of freedom of action for PTT management became painfully clear between 1959-1965, when the newly appointed centre-right-wing government curtailed the investments of PTT, as part of a general reduction of public expenditure. As a consequence, the waiting list for telephone connections increased from 65,000 in 1962 to 155,000 in 1965 (Ottenheijm 1974). Other serious problems facing PTT were the recruitment of qualified personnel, the brain drain of staff to the private sector, and the formal restrictions posed by the uniform standards for civil servants. As a consequence, PTT could not compete with private enterprise on the labour market. Through the development of in-company training, PTT tried to cope with these constraints on personnel policy.

In 1962 the Advisory Committee Goedhart, made up of representatives of the Ministries of T&PW and Finance, the Home Office, PTT and the academic community, was installed to make recommendations on the feasibility of increased autonomy for PTT in its investment and employment policy (Commissie 1963). In its 1963 Report the Committee argued that in order to cope effectively with the complex demands of its business environment PTT needed more flexibility and a relaxation of its legal and political impediments. Hence the Committee proposed a *sui generis* construction for the PTT administration (made-to-measure legislation under public law). PTT should be transformed into an independent para-state organisation with a legal entity status. The notion of *privatising* PTT in the form of a limited liability company under private law was rejected by the Committee, because this would bypass Parliamentary supervision and government control. The idea of splitting PTT into separate subsidiaries for its postal, telecommunications and money services was also out of the question. The Committee affirmed the complaints of PTT about detailed Treasury interference in its corporate planning and investment decisions.

The Committee argued that external borrowing should be allowed and PTT should be freed from the restrictions of the obligatory annual budget. In order to comply with its socio-economic obligations, PTT should be given more control over its budget, profits and depreciations by replacing the annual allocation of funds to two-years budgeting schemes and introducing a five-year planning system. This would reduce the role of the state to that of an additional financier. The Committee also supported PTT in its desire for more flexibility in its employment and recruitment policies. A minority within the committee did not agree with the recommendations of more autonomy for PTT in its employment policy. The representatives of the Home Office, responsible for the civil service, argued that special labour agreements for PTT personnel were unacceptable (Commissie 1963). They feared that a tailored policy for PTT would erode the personnel policy of the entire public administration.

Although the claims of PTT for (more) corporate autonomy were widely acknowledged, the Committee's recommendations met with insurmountable political difficulties. Although he was not really convinced by the Committee's suggestion that PTT's position *vis-à-vis* the civil service and the national budget was unique, the Minister of T&PW in principle supported the views of the PTT administration. The main opposition came from the Treasury, the Home Office and the trade unions. The Treasury refused to cut back its financial links with PTT because the large revenues were an attractive instrument to balance the budget and its overall fiscal policy. The Home Office and the public sector unions found the special arrangements for PTT personnel as set out in the report unacceptable. They were afraid that these arrangements would serve as a precedent for other public services demanding for special employment conditions for themselves. In 1967, after more than four years of political discussions, the Minister for PTT matters installed an Interdepartmental Committee to prepare legislation on the basis of the Committee's recommendations (Interdepartementale Werkgroep 1968). Although the Committee agreed on an appropriate institutional structure to govern the relationship between PTT and government, the distribution of tasks between the Ministry of T&PW and the Treasury, and the final responsibility for PTT's financial management and budget controls, posed serious problems. The Committee proposed granting PTT a legal entity status, installing a supervisory board (replacing the Advisory PTT-Council) and retaining political responsibility by adopting the *sui generis* construction (as put forward by the Goedhart Committee).

The disagreement between the Ministry of T&PW and the Treasury as to who really was in charge of PTT matters proved insurmountable. The 1970 initiative of the Minister of T&PW, to carry out the agreements reached in the Interdepartmental Committee about granting PTT a legal entity status by amending legislation, also came to nothing. The Treasury, backed by Parliament, successfully claimed that the financial accountability of PTT-matters belonged to their jurisdiction. As a consequence PTT's finances remained included in the National Budget. At that time the temptation to use PTT revenues to balance the budget was still too much to resist: PTT was the goose with the golden eggs. Organised business joined the discussion, claiming that: *".. in a period when restraint is more than ever required, it has to be considered as unacceptable that customers of the PTT services have to contribute*

indirectly through higher rates to the government's budget deficit. It makes it all the more obvious that in the short term a change in the state-owned PTT by reducing the company's dependence on the government's budget, is desirable (NRC Handelsblad 2-02-1973, quoted in Slaa 1987: 44)". In 1973, when the investments plans of PTT were cut and tariffs were raised as part of the macro-economic policy of the government to cope with the consequences of the oil crisis, the situation became really problematic with expanding waiting lists and poor service quality. To solve this problem two MP's presented a bill to Parliament to amend the 1954 Designation Act to allow PTT some kind of external borrowing, but this effort also proved fruitless. The thrust of the bill was that, in order to fully meet the demand for telephony, PTT should have the opportunity to negotiate loans for cost-effective investments from other sources than the Treasury (e.g. the capital market). In 1979, the Van Agt I Cabinet proved susceptible to PTT's demand for more managerial autonomy. The Minister held out the prospect of a gradual move towards more market conformity and more autonomy concerning tariffs and investment decisions, provided more permanent positive results would be achieved (Slaa 1987).

Pressures for Structural Reform in the late 1970s

At the end of the 1970s the PTT monopoly attracted more and more criticism. Both government and business were convinced that a thorough reconsideration of the established regime and the effects of technological, economic and international developments in telecommunications was required. It also became clear that PTT could only fulfil its proper function in this changing business environment, if it gained more corporate autonomy. The 1979 ad hoc Advisory Committee Rathenau, dealing with the socio-economic consequences of micro-electronics, conceived of PTT as a key actor in the development of dataprocessing, office automation and home information services. In the Committee's view, PTT also played a crucial role where the formulation and implementation of communications policies were concerned. The Rathenau Committee argued that a major investigation was needed to determine whether the position of PTT deserved reconsideration in the light of the new information and communications technologies (Adviesgroep Rathenau 1979). After telecommunications and micro-electronics were also mentioned as priority sectors in the Report on Reindustrialisation (WRR 1980), the government responded in the Summer of 1981 by installing the Swarttouw Committee to investigate and put forward institutional changes in the telecommunications domain (see below).

Because the knowledge necessary to formulate adequate policy alternatives for the emerging service economy was lacking, the Ministers for Science Policy and Economic Affairs in 1982 commissioned another examination by the communications experts Bordewijk and Arnbak (1983), who were instructed to investigate and provide a starting point for an integrated *tele-matics* policy. This 'Committee of two Wise Men' proposed an adjustment of the established regulatory framework by redefining the relationships between the major stakeholders and the information and communications sectors. In addition to the subsidisation of infrastructure modernisation and the active promotion of new services, the

Committee proposed that cable networks and tele-information services be liberalised, and a clear distinction be made between information transport and information services provision. Bordewijk and Arnbak suggested a future policy, based on the analytical distinction between four distinctive patterns of information flows (conversation, allocution, consultation and registration). This model implied the prolongation of the monopolistic provision of network facilities and the liberalisation of user-based equipment and tele-information services. The task of rule-setting could be entrusted to two independent bodies, the network-oriented Telematics Systems Council and the Telematics Services Council, concerned with the provision of the public infrastructure and the commercial applications of tele-services, respectively. The direct influence of the Bordewijk/Arnbak report on public policy was limited, as it received hardly any political support. Although its far-reaching recommendations were appropriate for the long term, the report was considered abstract and academic, lacking political feasibility and practical applications.

PTT's monopoly was not only questioned by independent experts but by big business as well. The increasing demand of business for dataservices and leased circuits in the 1970s challenged the reliability, flexibility and capacity of the then nearly saturated telephone network. In order to meet business demand, an upgrade and expansion of the infrastructure was needed, but PTT found itself faced with government restrictions on access to capital and qualified personnel. The banking, insurance, computing and publishing sectors were far from satisfied with the PTT framework and the provision of telecommunications services and equipment. These information-related industries complained about the following issues (CIB 1981, 1982, 1984; VIFKA 1984):

- the detailed political interference was constraining PTT in its long-term objectives with respect to the development of future infrastructure, services and tariffs;
- the restricted or deficient supply of terminal equipment, leased lines and data-services by PTT (i.e. high-priced and with a lack of variety);
- the restrictions in the use of other facilities than the ones supplied by the PTT (the laborious approval of equipment by PTT, interconnection between public and private networks);
- a lack of market responsiveness (partly caused by the absence of users' consultations);
- the conflicting interests between the public utility, regulatory, policy supportive and commercial functions of PTT.

In the seventies the political position of big telecommunications users and the information and computer industry was balkanised; they played only a minor role in the policy process. To challenge the political and economic monopoly of PTT in telecommunications, large firms involved in the information industry and information-related industries organised themselves in 1979 in the CIB. This trade association was established to create a favourable business climate for the use of information technology. Instead of subsidising mature and declining industries CIB

argued that the government should actively promote the innovative information industries by following deregulation and liberalisation strategies, that would foster the availability of flexible, reliable and inexpensive facilities and services. Therefore CIB asked for '*a major study of the purposes, role, functions and operations of the PTT, in the context of both maintaining effective basic and universal services while at the same time seeking to create an environment that will strengthen the capabilities of the Netherlands in an information-oriented age* (Arthur D. Little 1981: 154).' This investigation, in which the key stakeholders in Dutch telecommunications were able to participate, should be oriented towards a reappraisal of the existing PTT monopoly and examine whether a monopoly served everybody's interest in light of the new technologies and business opportunities.

5.5 *De-monopolisation of Telecommunications in the Netherlands 1981-1994*

The Swarttouw Committee: Setting the Agenda for Structural Reform (1981-1984)

In 1981 the centre-right Cabinet Van Agt I installed an Advisory Committee 'to advise the Minister for Transport and Public Works concerning the role the PTT can play in the light of the developments to be expected in information and telecommunications technology and any bottlenecks they might entail (Commissie Swarttouw 1982: 9)'. The government had become convinced that an advanced communications system was necessary to support the vital trade, distribution and financial interests of the Dutch economy. The Swarttouw Committee, named after its chairman (President of Fokker Aerospace Industries) consisted of six members, representing the industrial, technological and business user aspects with PTT providing the secretariat. The Committee interpreted its research question by investigating PTT's present and future responsibilities in the light of economic criteria (and mainly with respect to telecommunications). For that purpose representatives of PTT, the Advisory PTT-Council, the domestic equipment industry, and the computing and information-related industries were consulted; labour unions and consumer organisations were not consulted.

In its 1982 report the Committee stated that structural reform of Dutch telecommunications was necessary (Commissie Swarttouw 1982). Although it argued in favour of preserving PTT's monopoly on the infrastructure and traditional telecommunications services, the Committee concluded that the market for terminal equipment and value added services could be liberalised and direct political influence on PTT should be diminished. The provision of the infrastructure, the telephone, telex and datatraffic, together with the tasks of standard setting, certification and type approval, should remain the exclusive jurisdiction of PTT. With respect to the coordination of the PTT infrastructure and local cable systems, the Committee proposed a future integration of the two networks to be controlled by PTT, further elaboration was needed. The markets for terminal equipment and tele-services should be liberalised and developed into a level playing field in which PTT would compete with others on equal conditions. The Committee stated furthermore that the delineation of the public network and the competitive equipment and tele-services market needed further specification. Notwithstanding the fact that PTT as a public

utility could play a stimulating and leading role in industrial and innovation policy, the Committee argued that PTT needed more autonomy with respect to its investment policy, rate setting and service provision. To that end the Committee emphasised the need for a transformation of the PTT administration from a government department into a state-owned joint-stock company and the installation of a separate supervisory council, in which the major organised interests within society were represented. With respect to PTT's internal organisation, the Committee stated that the Moneyservices, Telecommunications and Postal Functions could remain incorporated within the administration for synergetic reasons, on the condition that there would be a clear-cut separation between these three activities.

The Swarttouw Report was welcomed with moderate enthusiasm. PTT, the Advisory PTT-Council and the representatives of the information industry welcomed the general suggestions made to increase PTT's corporate responsibility, liberalise some sections of the market and revise the institutional framework. PTT-management and the Advisory PTT-Council saw their enduring pleas for more autonomy from the government answered, while at the same time preserving the postal and the telecommunications functions within the corporation (PTT 1982; PTT-Raad 1982). The possibility of obtaining a legal entity status appealed to PTT's growing commercial ambitions. The creation of a Supervisory Council that would act on behalf of the government and organised business and replace direct political scrutiny, reflected the administrative ambitions of the Advisory PTT-Council to incorporate the body in its wider corporatist framework. For PTT, the Advisory PTT-Council and the labour unions, the proposals accompanying the change in status from the public to the private sector were important in the medium term, but they needed to be supported by short-term measures aimed at enlarging the corporation's autonomy with respect to investments, tariff setting and joint ventures. The proposal to liberalise terminal equipment market (excluding 'conventional' telephone sets) was not fully supported. PTT, the Advisory PTT-Council and the unions argued that PTT should have a say in which market players and products could be admitted without undermining the integrity and reliability of the network. The retention of 'conventional' terminal equipment in the public monopoly would also secure employment within the PTT-administration and the domestic manufacturing industry.

The information-industry, then organised in the SMM (trade association of publishers) and the larger business interest association CIB, welcomed the Swarttouw Report. They simply stated that its suggestions did not go far enough (SMM 1982; CIB 1982). Both SMM and CIB supported Swarttouw's suggestion of distinguishing between PTT's public task, the exclusive responsibility to control the infrastructure and secure interconnection between the network and terminal equipment on the one hand, and its commercial task of providing terminal equipment in a competitive market on the other. SMM and CIB furthermore elaborated on Swarttouw's suggestion of giving PTT more autonomy from government and establish a corporate Supervisory Council by stressing the necessity for a clear-cut separation between the operational and the regulatory functions of PTT. To supplement the PTT organisation exclusively concerned with operating the public services, an independent *Telecommunications Chamber* was required, that could deal with rule-setting,

supervision, tariff regulation, standardisation and arbitration. CIB regretted the fact that the Swarttouw Committee concentrated too much on the domestic margins and paid insufficient attention to the experiences with drastic restructuring programmes in the USA and UK. CIB was not really convinced about the validity of the Committee's point that the telecommunications division could remain integrated within the PTT administration. The decision to hive off the telecommunications branch into an independent subsidiary would improve customer flexibility and market transparency. The Committee's proposal to integrate the local cable networks in PTT's exclusive monopoly was unacceptable for the representatives of the information industry, because the cable network offered an interesting opportunity (especially for publishers) to develop new telematic services. The CIB stated that experiments with information technology should not be developed solely by PTT, but the promotion of new services needed the active involvement of both PTT and organised business, and should ultimately be coordinated by the Ministry of Economic Affairs.

In 1984, nearly two years after the publication of the Swarttouw Report, the centre-right Lubbers I Cabinet endorsed the main recommendations of the Committee in the first *White Paper on the Tasks and Functions of PTT*, although actual measures were not yet taken (TK 1983/84: 17370). This delay was caused by changes in the cabinet from centre-right to centre-left to centre-right again and by opposition from the Social Democrats and the Christian Democrats, who considered the Swarttouw proposals too radical. The negative effects of a proposed liberalisation of the equipment market upon employment, the hiving off of PTT from the government administration, and the creation of an independent supervisory council outside parliamentary scrutiny, caused serious political tensions. The Swarttouw Report aroused opposition from the domestic equipment industry (e.g. Philips), trade unions, and cable operators; nor did PTT or the Advisory PTT Council fully agree with the Swarttouw proposals (Arnbak 1986). In 1982 the Social-Democratic Minister for PTT Affairs responded by shelving the Report, encouraged by the protest of the domestic equipment industry and the trade unions' fear that the attack on the equipment monopoly would mean the loss of market share to Far East producers and eventual job redundancies within the PTT-administration and the domestic electronics industry (AbvaKabo 1984). The group of opponents was joined by cable operators and municipalities and was stirred into action by the suggestion that the cable networks would be brought under future PTT control. In November 1983, political opposition was still so strong that in a draft White Paper the existing structure of the PTT-administration remained largely intact (apart from a reorganisation caused by the de-nationalisation of the PTT Money-services). Two months later the situation had improved as a result of the priority given by the centre-right Cabinet Lubbers I to the retreat of the state in the national economy. In order to improve the country's vital interests of commerce, transportation and finance, the government regarded an advanced communications infrastructure and a leading role for PTT in the development of new services as a prerequisite. The Cabinet argued that Dutch telecommunications should follow the developments in the US and UK and because of its strong international dependence structural adjustment had to be

seriously considered: "*Not participating but awaiting the developments abroad may have disastrous consequences for the economic developments of every industrialised country* (TK 1983/84: 17370/2-3: 1)."

The White Paper enforced the broad outlines of the Swarttouw Report by following its suggestion to restrict PTT's future monopoly to the installation and maintenance of the public infrastructure, and the exclusive provision of telegraph, telephone, telex and dataprocessing services. The government opened up the way to providing certain advanced services by private companies in competition with PTT through the public network. The use of leased lines for communications purposes by parties other than the contracting party was not allowed. In one respect the 1984 White Paper differed markedly from the Swarttouw Report: while the latter proposed only a partial termination of PTT's monopoly on telecommunications equipment, the former recommended the liberalisation of all terminal equipment,. There would be a liberalisation of PTT's monopoly on the procurement of *advanced or non-traditional* terminal equipment, implying competition between PTT and private industry. The supply of traditional equipment, like telephones, private telephone exchanges and telex equipment, would remain the exclusive domain of PTT. The White Paper argued that an adequate provision of telecommunications facilities could only be assured when PTT had joint responsibility over the infrastructure and the equipment directly attached to it. The main reason for maintaining PTT's monopoly on traditional equipment seemed to be defensive, however. Termination would have serious effects on employment in the domestic equipment industry and the PTT-administration (TK 1983/84: 17370). The 1984 White Paper suggested a continuation of the status quo regarding control over cable systems by making it clear that local cable operators were not allowed to provide services other than broadcasting. Furthermore, the White Paper announced the establishment of an advisory committee to investigate the possibility of a future integration of the cable networks and the local telecommunications infrastructure, to be controlled by PTT. Because PTT fulfilled a special role in society, the government argued that it should be granted specific privileges and duties. Therefore it proposed to install a consultative body to link PTT more effectively with its business environment and to facilitate regular negotiations between PTT and its stakeholders. PTT was required to play a leading role in the promotion and coordination of techno-economic developments in the telecommunications domain. The government also indicated that a follow-up to the Swarttouw study was needed to examine the status and the structure of PTT to cope with the present and future developments in (inter-)national telecommunications.

The information, computing and services industry, organised in the CIB (1984), SMM (1984), VIFKA (1984) and VNVI (1984), was somewhat disappointed by the government's official reaction to the Swarttouw report. Firstly, the White Paper was published almost three years after the report; secondly, it did not put forward any new measures (only a new examination); and thirdly, the differences made between the provision of basic transport services and value added services on the one hand and PTT's operational and regulatory and policy supportive functions on the other, were not clear. The policy changes proposed in the 1984 White Paper were considered to be directed towards protecting the established interests of PTT and the domestic

equipment industry. For example, the government's proposal to liberalise the terminal equipment market only partially, was seen as sheltering PTT's monopoly from market competition. The representatives of the information industry stated that telecommunications policy should include, besides safeguarding public sector interests, new goals such as the active promotion of market entry and fair competition. The organised information industry argued that the delineation between a public monopoly and market competition should be based on a definition that was both understandable, technologically independent and in line with international developments. Therefore PTT's monopoly should be restricted to the provision of basic services (notably telephony, telegraphy, telex and datatraffic), and its regulatory and supervisory activities should be transferred to a government agency. A clear liberalisation of the market for terminal equipment and value-added services would give a strong impetus for innovation and entrepreneurship in tele-matics. According to the information industry representatives, the commercial development of new services required not only the introduction of market competition, but a solid infrastructure that could be provided by both PTT and the cable companies. The possibility of utilising cable networks for service provision, however, was insufficiently recognised by the government.

There was a difference of opinion within the information industry between the publishers and the service providers, organised respectively in the SMM (1984) and VNVI (1984), and the trade association of the computing industry VIFKA (1984) and the larger business interest association CIB (1984), whether PTT should be allowed to enter the tele-services market. The former two associations were against, restricting the involvement of PTT to the provision of basic services and leased lines while the latter two were not necessarily against a participation of PTT in that market, provided fair competition and equal access were guaranteed. The distinction made by the government between keeping traditional equipment within and advanced equipment outside of the public monopoly was considered as artificial and untenable by the entire information industry, in the light of the rapid technological developments. In order to create a more transparent equipment market the task of approving terminals should be transferred from the PTT to an independent institution, in which the various stakeholders (network operators, suppliers of services, the users and equipment manufacturers) would collaborate. Furthermore, cross-subsidisation was to be avoided by establishing separate accounting and reporting procedures between the monopoly and the competitive activities of PTT. The possibility for further organisational separation by a divestiture of PTT into two distinct corporate units was not ruled out.

The Steenbergen Committee: Outlining Structural Reform (1984-85)

The next step in the structural reform of Dutch telecommunications was the installation of another committee in June 1984 to evaluate the present responsibilities and functioning of the PTT administration and to propose adjustments in the status, structure, task and supervision of PTT to improve its flexibility, decisiveness and entrepreneurship (Commissie Steenbergen 1985a, b). The recommendations made by the Swarttouw Committee and endorsed by the government in the 1984 White Paper

were not implemented as yet, but served as a guideline for the new consultative and advisory round. In a number of aspects the newly established Committee differed strongly from the established tradition of public policy making in the Netherlands (Arnbak 1986). First, instead of being composed on a broad representational basis (membership reflecting the major interests throughout government and/or society), the Committee was set up as a small *Committee of Wise Men*[8]. Secondly, the Steenbergen Committee laid a strong emphasis on fact-finding by consulting the major stakeholders in telecommunications policy through individual and confidential hearings. Thirdly, the Committee investigated the international context in which the Dutch economy was strongly embedded: the relevant techno-economic developments abroad and the various national political-administrative responses were examined and official visits were made to postal and telecommunications administrations abroad. Fourthly, in preparing its recommendations, the Committee worked together with the international management consultancy firm McKinsey & Co.[9]

The Committee's Report, published in July 1985, stated that a future telecommunications policy should balance monopoly and competition and elaborate upon the dual role of PTT. As a public utility it should provide the network and be able to play a leading role in the development of new services. As a private enterprise PTT would be allowed to offer terminal equipment and tele-services in open competition with third parties (Commissie Steenbergen 1985a). The Steenbergen Committee was susceptible to the complaints made by business, consumers and PTT itself about the political and administrative restrictions confronting PTT and the domestic telecommunications sector. These constraints limited PTT's manoeuvrability with respect to infrastructural investments, the promotion of new services and the development of new markets, and impeded the overall flexibility and innovativeness of Dutch telecommunications. The Committee separated PTT's traditional activities into four separate functions:

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8 The Committee included Mr. Arnbak, a Danish professor of telecommunications engineering from the Technical University of Delft, Mr. Albrecht, a legal expert in industrial relations and Chairman Mr. Steenbergen, a former senior executive of a large insurance company and a consultant in business administration/automation.Taking into account all the previous failures and marginal adjustments, the Committee was well aware of the difficult mission to achieve a policy breakthrough towards regulatory reform. Otherwise they would not have chosen a quote from Macchiavelli as the motto of their report (Arnbak 1989b). This quote perfectly illustrates how difficult it must have been for the Steenbergen Committee (and of course for all the other committees before) to realise political changes in general and in Dutch telecommunication in particular: *"And it is worth noting that nothing is harder to manage, more risky in the undertaking, or more doubtful of success than to set up as the introducer of a new order. Such an innovator has as enemies all the people who were doing well under the old order, and only half-hearted defenders in those who hope to profit from the new. This half-heartedness derives partly from fear of opponents who have the law on their side, and partly from human scepticism, since men don't really believe in anything new till they have had solid experience of it (Machiavelli 1977: 17)."*

9 The Committee contracted out sections of its investigation to McKinsey, like the assessment of strengths and weaknesses of the Dutch PTT compared to other European PTT's, an examination of the bottlenecks in its corporate strategy (employment conditions, political interference with investments, tariffs and revenues), a survey of several markets (tele-services, PABX, terminal equipment, infrastructure development), and an users survey for the postal and telecommunications branch (McKinsey 1985).

- the public utility function: a responsibility for the construction and maintenance of the infrastructure and basic services;
- an entrepreneurial role: the provision of value added network services and terminal equipment in an open market environment;
- the regulatory task related to standard setting & approval, rule setting and supervision;
- the policy supportive function: its influential recommendations on government policy with respect to post and telecommunications.

The Steenbergen Committee stated that PTT's monopoly should be restricted to the installation, exploitation and maintenance of the national infrastructure and the supply of the basic services, telephony, telegraphy, telex, and datatraffic, together with an obligation to provide leased lines. The present public monopoly on the provision of terminal equipment and tele-services should come to an end allowing competition, permitting PTT to participate on equal conditions. With this liberalisation proposal the Committee bypassed the modest liberalisation measure put forward in the 1984 White Paper. The Committee expressed a liberal attitude towards the use of leased circuits by corporate users and new service providers. It argued that a ban on the resale of capacity and third party use could impede the development of new services. In view of this, the Committee proposed that the provision of leased lines be included in the universal service obligation: PTT should be forced to provide leased circuits on demand. Furthermore the resale of transmission capacity and the interconnection with other leased circuits to the public switched network should be allowed, on the condition that these circuits were used for providing tele-services. The Steenbergen Committee suggested that a special agency (to be established in the future) would issue permits towards that end.

The Committee argued for a new governance structure in which PTT would be granted an exclusive concession for the operation of the public infrastructure and the provision of the basic post and telecommunications services. In this concession-based regime a line could be drawn between the mandatory provision of reserved services and services offered in an open market. The concession could contain certain guidelines and preconditions with respect to universal service provision, quality of service, tariffing, consultation etc., to be acted upon by the concession holder in the operation of the licensed services. The Committee stated that PTT's traditional involvement in regulation, licensing, type approval, standardisation and policy formulation needed to be separated from its operational function of providing services. The functions of rule-setting, licensing and supervision would be taken away from PTT altogether and assigned to a special agency in charge of post and telecommunications regulation attached to the Ministry of T&PW. This RVPT-agency would regulate and oversee PTT's public utility rates and quality of service and would furthermore be entrusted with the tasks of granting concessions and licenses for network operation, recognition of testing institutions, type approval & certification and frequency allocation. The future institutional framework would include two other institutions, that would replace the Advisory PTT-Council. The RATB, a committee of independent experts, would advise the Minister on post and

telecommunications issues and longer-term planning with regards to the public infrastructure and the reserved services. The Consultative body PTT would serve as a platform for PTT and its major stakeholders to discuss future investment and marketing decisions with respect to the reserved infrastructure and basic services.

Regarding PTT's future legal status, the Committee proposed to transform it into a state-owned company, herewith lifting the political constraints of the civil servant statute and external borrowing prohibitions. The Committee showed that PTT's profits and depreciations were increasingly transferred to the Treasury instead of remaining within the PTT administration to build a solid financial base (see fig 5.1). In order to finance the accelerating investments in network modernisation and the development of new services in the 1980s, PTT required more control over its operating cash flow and direct access to outside debt funds. The Committee strongly recommended a legal entity status through a joint-stock company: this would enable PTT to carry out its corporate and public functions more freely and prevent the government from interfering directly with the daily operations and hampering corporate planning (Commissie Steenbergen 1985a, b; McKinsey 1985). There would still be indirect governmental control because all the shares would remain in the hands of the state. Besides improving its financial flexibility and long-term return on investment, the legal-corporate structure of a public limited company for PTT would imply a replacement of the civil servants' statute, herewith facilitating market-oriented wage and employment conditions. The Committee proposed that the future PTT holding should develop into a decentralised holding with three subsidiaries, one dedicated to Mail and two dedicated to Telecommunications. This meant that PTT was forced to split its Telecommunications function into a *public utility* company exclusively in charge of the operation of the infrastructure and the provision of reserved services, and a *commercial* company active in the competitive markets of terminal equipment and tele-services. The public and private activities of the Telecom branch were separated to secure fair competition by preventing a cross-subsidisation of its competitive services. The Committee did not see any reason to separate the utility and entrepreneurial function of the Postal branch.

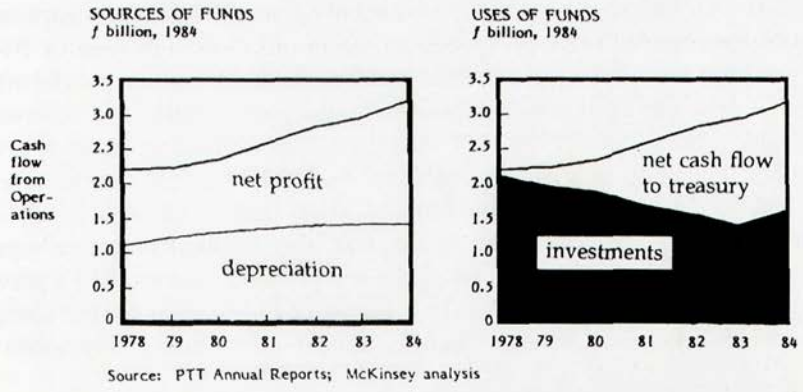

Figure 5.1: Financial Situation of PTT 1978-84. Source: McKinsey 1985: A-3.

In December 1985, shortly after the publication of the Steenbergen Report the government presented the Second *White Paper on the Tasks and Functions of PTT* (TK 1985/86: 17370). The Cabinet endorsed the broad outlines of the Steenbergen report, which fitted perfectly into its official privatisation and deregulation policy. The 1985 White Paper argued in favour of an orchestrated and simultaneous implementation of the policy measures aimed at the structural reform of PTT, the liberalisation of the markets for terminal equipment and tele-services and the enactment of a new institutional framework by 1989. The 1985 White Paper was directed towards encouraging innovation and competition in the provision of telecommunications facilities, while at the same time securing the nation-wide and uniform provision of basic communications services. The government proposed to open up the markets of tele-services and equipment to competition and attempted to solve the entangled discussion about the delineation of PTT's monopoly in terms of traditional and non-traditional terminal equipment (caused by the 1984 White Paper). It adopted the Steenbergen recommendations and thereby overruled its previous decision. The government precluded the resale of transport capacity.

In the new framework PTT would be granted exclusive control and management of the national postal and communications network.[10] The construction, maintenance and operation of the telecommunications infrastructure and the reserved services (telephony, telex and datatraffic) would be exclusively carried out by PTT Telecom. Within its exclusive concession PTT was obliged to provide leased circuits at request. The resale of capacity aimed at providing tele-services would be made possible through permits to be issued by the Minister of T&PW. Unlike before, PTT would be allowed to make a profit in the performance of its public tasks and would be at liberty to carry provide communications services other than the public services with which it has been entrusted. In order to comply with the EC competition rules, PTT should demonstrate that the granting of its exclusive concession was justified and that certain conditions concerning its market dominance were met (Arnbak 1989a). If PTT failed to fulfil its obligation to provide the exclusively licensed services to certain customers on time, however, the injured party could apply to the Ministry for a license for a closed user group network.

The Minister of T&PW was entitled to issue only general directives regarding the operation of the reserved services, specifying the results to be achieved by PTT in terms of performance levels (e.g. universal service, quality of service provision) and to establish a price cap system to be observed by the public operator to achieve fair and affordable prices. After 1989 PTT would be able to conduct its own pricing policy within limits and on certain conditions. Any tariff increase for the reserved services had to remain below the consumer price index and would still need ministerial approval. The concession holder was also required to create separate reporting and accounting systems for its public and private functions. PTT's previous regulatory and licensing responsibilities (e.g. the issuing of licenses for the operation of cable networks) would be transferred to the new Directorate of

10 While PTT Post's monopoly on the distribution of letters less than 500 grams persisted, competition was allowed in the market of parcel and courier services delivery.

Telecommunications and Postal Affairs HDTP, to be established within the Ministry of T&PW. This administrative body would be responsible for regulation, supervision, frequency management, approval & certification. The institutional framework would be completed by an Advisory Council on Telecommunications and Post RATB and a Consultative Council PTT. The first would consist of a small group of independent experts advising the Minister about the performance and development of the infrastructure and the reserved services. The second would facilitate communication between PTT and its major stakeholders about policy issues related to PTT's public functions.

In order to increase the efficiency and market responsiveness of the PTT-administration, the government supported the change from a state department into a holding company with the plc-form (NV) and two separate post and telecommunications subsidiaries with a Ltd corporate status (BV), all subject to civil law. Like any other private enterprise, PTT would have to aim for sufficient levels of return on investment, and was allowed to create subsidiaries and enter into joint ventures with other companies. This future PTT with the state as its sole shareholder, should be given permission to negotiate loans on the capital market, to enter into joint ventures and develop a market-based wage and working conditions policy. In the policy process the government made one reservation: in the new situation PTT had to generate a level of revenue (through taxes and dividends) that would match its traditional contribution to the annual government budget. The White Paper stipulated that government influence was restricted to the appointment of members of the Supervisory Board, certain rights on behalf of its role as sole shareholder and the issuing of the concessions (and the conditions attached to it).

The majority of stakeholders reacted positively to the Steenbergen report and the subsequent 1985 White Paper. The large users, computing firms, service providers and consumer representatives saw their pleas for a more transparent market answered (CIB 1986; VNVI 1985a; RvB 1985; Consumentenbond 1984). A more flexible PTT, operating at arm's length from the government, could more easily respond to market demand. The demands for a functional separation of PTT's public utility and the commercial services and the transfer of its regulatory and licensing activities to an administrative body, were met in the White Paper. The domestic equipment industry, organised in NETELCOM (1986), was one of the few parties, along with PTT and its unions, to criticise the reform proposals as being too radical. The manufacturing association asked for a phased introduction of the restructuring measures over five years. This would allow the equipment industry sufficient time to adjust itself to the new market conditions. Such a step-by-step implementation would also keep up employment levels. The small consumers organisation *Konsumenten Kontakt* (1986), strongly associated with the labour unions, claimed the tendency to restructure telecommunications was a strategy of big business for developing new markets and creating new needs no one really wanted. *Konsumenten Kontakt* was largely satisfied with the status quo, although it made clear that telephone tariffs could be cut by decreasing the annual financial contribution of PTT to the Treasury.

Other objections came from PTT, workers' representatives and the public sector unions. PTT found some major and minor shortcomings in the Steenbergen Report and the consequent White Paper, but endorsed the majority of the policy recommendations (PTT 1985a, b). PTT-management supported the Committee's proposals for the concession-based system based on the exclusive provision of the infrastructure and basic services, and the liberalisation of the equipment and the tele-services market, as long as there remained a protected core telecommunications monopoly. It also strongly advocated the proposal that the postal and telecommunications functions remain integrated within the future corporation, that would be granted a legal entity status, operating autonomously from the government. PTT strongly advocated cutting back political intervention and actively promoted a loosening of external borrowing and corporate employment restrictions. PTT was in favour of conceding the future corporation a plc-structure, and agreed with the plan to create a new framework for consultation, advice, regulation & supervision. As far as the advisory body RATB and the Consultative Body PTT were concerned, PTT was unable to discover much difference in terms of status and jurisdiction with the Advisory PTT-Council.

Although endorsing the Steenbergen recommendations in broad terms, PTT put forward some preconditions and criticised some of the proposals. First, PTT stated that it needed sufficient time to prepare and adjust its internal organisation and corporate strategy to the new business environment. In order to start on an equal footing with its major competitors, it advocated prompt political decision-making and a simultaneous implementation of all the measures. Secondly, PTT detected a pro-computing bias in the Steenbergen Report, and an underestimation of the structural conflict in terms of regulation and standardisation between the information/computer industry with its global free trade ideology and the telecommunications sector with its nation-wide public service tradition. The Steenbergen Report's insistence on allowing the resale of leased lines aroused in PTT a fear of the dangers of *bypass* and *cream skimming*. Private companies could provide services selectively and at a lower price than PTT thereby leaving it with high-cost low revenue customers. Thirdly, PTT felt disappointed at the rather one-sided attention given to the telecommunications branch and its prosperous prospects, hereby overlooking the postal division. Furthermore, the effects of the proposed reform measures upon employment within PTT were not examined. Fourthly, PTT strongly opposed the proposed split of its Telecommunications Function into separate public utility and commercial subsidiaries. Such an organisational separation was considered undesirable and detrimental as it would obstruct the exploitation of *economies of scale and scope* between the provision of the basic and the enhanced services. A divestiture of the telecommunications division would also imply another major internal restructuring, while that division at the time was already in the process of reorganising its functional structure to increase market responsiveness and relocating its headquarters to Groningen as part of the regional economic policy of the government.

The PTT workforce, organised in Departmental Committees and public sector unions, agreed with corporate management to keep both the telecommunications and

postal services and the public and commercial activities integrated within the telecommunications function (AbvaKabo 1984; ACOP *et al.* 1985). Both PTT-management and the unions were convinced of the necessity for PTT to develop its own corporate investment and employment policy, otherwise the company would lose its competitiveness and consequently market shares and jobs. The labour representatives were disappointed at the information in the Steenbergen Report on the consequences of automation and digitisation, and the proposed far-reaching institutional changes for the PTT workforce. Unions and management were not really convinced that the plc-structure, put forward by the Steenbergen Committee, was the appropriate status for PTT in the future. Both were still slightly in favour of the more moderate *sui generis* construction in which PTT (as some kind of a para-state organisation) would have more freedom *vis-à-vis* the government, but nevertheless remain within the public sector (Van Uffelen & Bloemarts 1985). Because civil service pensions were not transferable to the private sector and had to be kept in the National Pension Fund, this alternative would furthermore not touch upon the civil servant's statute and the pension rights of PTT staff. The unions had real difficulties accepting the government's proposal to privatise the PTT-administration. For them the plc-form rendered insufficient guarantees against a potential sale of some of the state assets (AbvaKabo 1984, 1988). The public sector unions, therefore commissioned an in-depth comparative study of the privatisation measure and the *sui generis*-alternative. This study largely subscribed to the Steenbergen proposals: a joint-stock company, subject to company law, would have clear advantages over the *sui generis*-construction subject to public law in terms of corporate flexibility (access to the capital market, employment conditions and allowance for joint ventures) and legal-administrative transparency (limits to political interference, less complex and more compliant to cope with changes)(Berenschot 1985). When the public sector unions realised that there was no real alternative to the clear-cut privatisation of PTT, the employee representatives moderated their criticism and joined the discussion on the reorganisation and the implementation of the new PTT structure. Since the question whether PTT ought to have a public or a private status had become less important, two things remained important for the organised PTT workforce: it strongly favoured an integrated organisation that would remain 100 per cent state-owned.

Implementing Structural Reform (1986-89)

After the two Committees had put forward their proposals and two White Papers, it was time for Parliament to prepare legislation. In April 1986 the Standing Parliamentary Committee on Transport and Public Works endorsed the outlines of the 1985 White Paper and authorised draft legislation. In December 1987 a package of four bills was introduced in Parliament:

- the PTT Personnel Bill, including rules regarding the future legal status of PTT personnel;
- the Telecommunications Bill, replacing the 1904 Telegraph and Telephone Act 1904;

- the PTT Authorisation Bill, regulating the new role for PTT as a limited liability company and granting it the concessions under the new post and telecommunications legislation;
- and the Post Office Bill, revising and updating the 1954 Post Office Act.

This legislative package, to be implemented in January 1989, was discussed early 1988 and widely accepted by Parliament in June and enforced in October 1988. The majority of the Steenbergen recommendations were followed by the government, only a few were not implemented. The suggestion to levy a value-added-tax on all the services provided by PTT was ignored. The government argued that the supply of basic public services by PTT needed to be excluded from the VAT-regime. The problem whether PTT staff could stay in the National Pension Fund when PTT was transferred from the public to the private sector was solved through the creation of a corporate pension fund subject to private law that would take over the existing pension rights. The Committee's proposal for a formal division of PTT Telecom into a public utility company and a commercial enterprise to avoid cross-subsidisation was not fully adopted by the government. The major political parties were divided: the major opposition party, the Social Democrats, was against, the Christian Democrats (in government) preferred to give PTT time to restructure itself, whereas the Liberal-Conservatives (also in government) were in favour of a separation of PTT Telecom. The Cabinet was put under pressure from the information and computing industry, supported by the Ministry of Economic Affairs, that favoured a divestiture in order to secure fair competition and market transparency (CIB 1986; VNVI 1985b, 1988). Finally a political compromise was reached in which the centre-right Cabinet did not rule out the legal separation of the telecommunications division, but its final decision was postponed and would be taken within five years after 1989. This would give PTT time to prepare its internal organisation for a more liberalised environment. Before the separation into two subsidiaries was decided upon and carried out by government, cross-subsidisation had to be precluded to make fair competition possible. In order to make the information flows and economic transactions between PTT's public and private activities more transparent, appropriate safeguards like separate accounting and reporting systems would be created.

The government furthermore changed the statute of the interdepartmental Advisory Council on Post and Telecommunications RATB and the regulatory/supervisory body RVPT acting autonomous from the Ministry, and turning them into clear departmental bodies. The government had decided furthermore that the new administrative structure would not be implemented before 1988, as part of the package deal to restructure the entire telecommunications sector. The information industry criticised the government for overlooking the conflicting interests of the Ministry as both regulator and sole shareholder of PTT and underestimating the administrative 'teething problems' that would occur in the transition of a public monopoly to a regulated market. The CIB (1986; CIB-RCO 1987a, 1988) and VIFKA (1986a, 1986b, 1987) strongly pushed for an independent regulatory framework and an interdepartmental advisory body on media and telecommunications policy, entrusted with a clear mandate and installed as soon as

possible to accommodate the far-reaching changes to come. The government, however, gave clear priority to reforming the PTT-organisation in favour of the restructuring of its external environment. The liberalisation of the equipment and the service markets and the creation of a new regulatory, advisory and consultative structure were due to be implemented after 1988. The government argued that the new style PTT should start from a position of strength and that for the transitional period 1985-88 the tight political controls on PTT with respect to its financial management and working conditions could be loosened provisionally. At that time PTT's position was so strong that the company and its telecommunications business could remain integrated and that the supervisory, consultative and advisory bodies were given only limited political weight. A near complete internal reorganisation of the telecommunications entity between 1983-85 persuaded the government to postpone the decision to separate the public and commercial activities until 1994. The Telecommunications Bill and the conditions attached to the exclusive concession were almost entirely written by PTT officials, and the formal consultations in the Consultative Body PTT Telecom would not start until 1989. The limited size of the regulatory and supervisory body HDTP would prevent any regulatory interference and detailed investigations. PTT (1985a; 1985b) had argued that the regulatory body had to be kept small (both in the number of people employed and in expertise and archives/data gathering) to cooperate more effectively (wherever necessary PTT could provide technical support). As far as the advisory body RATB and the Consultative Body PTT were concerned, PTT preferred no major changes with the former Advisory PTT-Council.

PTT prepared itself for the new situation by changing its management structure from a government department, organised six directorates (Postal, Telecommunications and Money Services, Technical Affairs, Personnel and Financial-economic Affairs) and a Central Board into an autonomous commercial corporation owned by the state, to be named KPN Royal PTT Netherlands. Direct management would shift from the Minister (supported by Parliament and the DG PTT) to the Executive Board of Directors of PTT, supported by an Supervisory Board of non-executives (with a minority of its members appointed by the government). Some of the members of the Executive Board were already appointed by government in 1987 and began to act in a shadow capacity behind the DG and the Central Board to prepare the corporatisation and eventual privatisation of the PTT administration. The majority of newly installed Executive Board had experience in top positions in the private sector[11]. Only a few of the then PTT directors were allowed to continue in an executive role in the new-style corporation, while others would switch over to fulfil an advisory role or left the company. The distance between the state and PTT would increase in the new setting, but governmental influence would still be prevalent by way of the appointment of commissioners, supervision over the provision of network capacity and basic services, and the regulation of tariffs. The

11 The new PTT President, Mr. Dik, was recruited from Unilever, the President of PTT Telecom Mr. Verwaaijen came from the Dutch branch of ITT/Alcatel, while other important executives were former senior managers of IBM Nederland, UCN Nuclear Energy and Pakhoed Logistics.

government also had an important say in the extent and timing of PTT's floatation (five years after putting in place the 1989 framework).

As early as 1986 management and employee representatives of PTT started the official negotiations about the employment effects of the shift from a hierarchical administration towards a market-driven organisation. Initially the civil servants' unions rejected the plan to restructure PTT, because they feared job losses and a deterioration of employment conditions. They regarded privatisation as an easy measure to combat mismanagement caused by lagging investments and constrained corporate planning (Soeterbroek & Walravens 1985). The PTT unions, however, found themselves alone opposition to the privatisation plans after PTT-management had abandoned the sui generis construction. When the majority of PTT-employees also supported the privatisation alternative, because such a switch would imply a prolongation or clear improvement of their salaries, secondary benefits and/or pension schemes, the unions decided to change their position to accept the privatisation proposals (Van den Besselaar & Visser 1993). More or less convinced about the necessity to restructure the company and the consensus regarding PTT's corporate autonomy from the government, the unions gave up opposition and opted for an active involvement in the policy process by participating in the negotiations about the employment effects. In May 1987 an agreement was reached between management and the unions to make every effort to keep employment levels up and prevent any lay-offs within the company for the transitional period 1987-91 (PTT 1987). The government had furthermore stipulated that PTT management had to secure that in 1989 none of its employees would be worse off in terms of income compared to the former situation. For a transitional period of eight years PTT had to maintain and gradually phase out the pre-1989 income levels for the lower ranks in its workforce by falling compensation schemes. The higher ranks saw an immediate increase in salaries. An agreement was reached between PTT management and labour representatives about the replacement of the civil servant's statute by a single collective labour agreement to be decided at the holding level, including both the capital-intensive telecommunications and the labour-intensive postal subsidiaries. In December 1988 the first collective labour agreement between management and the unions was reached. For the first time in its corporate history PTT staff were no longer paid as civil servants and tied to the pay scales of the government administration, but subject to a corporate labour agreement in line with the private communications industry.

A Second Round of Structural Reform: 1989-1994

The Dutch legislative framework, established in 1989, was based on a system of privileges and obligations for KPN to secure its exclusiveness in the provision of basic services and to protect the public interest by forcing KPN to safeguard the provision of these services. The Telecommunications Act was designed to accomplish the following purposes:

- to promote the development of the public infrastructure and basic services in a socially and economically responsible way;

- to increase KPN's operational, financial and strategic scope;
- to increase business opportunities for other companies in the equipment and tele-services markets.

After the 1989 framework was installed, the pace of the liberalisation and privatisation process was slow with the government playing lip service to the principle of increased competition and sometimes using delaying tactics, among other things to prepare the PTT company for its eventual privatisation and to protect the newly established regime from a hard confrontation with international market forces and new technologies. KPN's obligation to meet certain social goals and its need top produce commercially acceptable results proved increasingly difficult to reconcile. The goal of universal service provision could hamper KPN's corporate goal of maximising market shares and profits, striving for efficiency by cutting costs and replacing value-based pricing for cost-based tariffing. Furthermore, KPN's public task to provide basic services on a universal basis was challenged by new service providers by-passing the national public infrastructure (e.g. reselling network capacity to third parties) and increasing competition between national and global operators.

The present legislation did not make clear how the government proposed effectively to regulate such a dominant market player as KPN/PTT. The proposal for a legal separation of PTT was originally included in the 1989 Act to serve the policy objective of fair competition in the domestic market by making cross-subsidisation between the utility and the commercial divisions virtually impossible. The advocates of separation maintained that the established structure enabled PTT Telecom to subsidise its commercial activities in the non-licensed markets (notably terminal equipment and foreign investments) through its exclusively licensed services. The government and KPN agreed in 1992 that a divestiture of PTT Telecom was politically undesirable and would be counterproductive for the domestic telecommunications sector, given the relatively small size of the Dutch operator and the intensity of international competition. A structural separation of PTT Telecom would not only hamper its foreign expansion, it would complicate the floatation process, generating less revenues for the government. PTT Telecom should be allowed to build up a strong presence in the international market through internal growth and strategic partnerships on the basis of a strong footing in its home market. PTT Telecom argued that, in view of increasing competition and the size of its foreign competitors, such a legal separation would hamper its universal public service obligation in the domestic market and adversely affect its position abroad. Its Chairman Verwaaijen considered the plans for a divestiture completely outdated: *"It's no longer the small country of the Netherlands in which a big PTT together with some small companies operates. You have to look at the future from a European perspective, where giants such as IBM and British Telecom join forces to serve international customers. Separation would not only be a bad thing for us, but for the entire national economy. The Netherlands are in need of an innovative telecommunications company, that manages the national infrastructure and is*

involved in the operation and exploitation of the business services provided through the national network (NRC Handelsblad, 23-2-1991)."

The government also contributed willingly or unwillingly to the lack of transparency in the Dutch telecommunications field. Besides acting in a supervisory capacity with regards to the single operator and the industry, the government also had a direct interest in the regulated company as the sole shareholder. As legal experts have pointed out, the 1989 Act incorporated four partly conflicting goals (Dommering 1988; De Ru 1988a): protecting PTT's monopoly position in view of the supply of public services and the infrastructure; boosting PTT's international position; enlarging the possibilities of third parties to provide services and equipment in order to stimulate innovation; and generating substantial proceeds for the Treasury. So the socio-economic mission of PTT was hampered by the government's demand for high dividends and the (potentially) high revenues to be generated by a floatation of PTT, envisaged in the near future. The advisory body RAPT (1991a) argued that the contribution of PTT to the Treasury had a negative influence on price levels: the government clearly attached more importance to PTT's contributions to the national budget than to lower consumer prices.

PTT-management was clearly in favour of privatisation, provided that the company would remain integrated and retain some of its monopolistic privileges. It consolidated its dominant position in the domestic market segments and embarked upon an international expansion strategy through the active penetration of new geographical and/or product markets and the build up strategic alliances. Another argument for dropping the legal separation of PTT had to do with the fact that the divestiture of PTT's public and commercial functions into two separate companies presupposed a formal and stable boundary line between the regulated and non-regulated markets. In a business environment where rapid technological developments and international deregulation already challenged some of the dedicated services, the stipulation of such a public-private borderline seemed to be very difficult to accomplish. The Minister considered the monitoring of and supervision over fair competition in Dutch telecommunications to be the responsibility of the European Commission, hereby circumventing any national responsibilities in applying Dutch competition policy on these matters.

After the first liberalisation round in which the market for services and terminal equipment was liberalised, the Dutch government was more or less taken aback by the ongoing deregulation aimed at creating a European integrated market. In the final stage of drafting the 1989 legislation, the public officials were slightly surprised by the Commission's plans for a common telecommunications market. After a brief investigation, the Ministry of T&PW was reassured that the Telecommunications Bill was compatible with Community legislation. Between 1989-1994, Dutch telecommunications policy was brought into line with the enlarged scope of EC legislation by (partially) opening up the markets of satellite, mobile and datacommunications to competition. The liberalisation process in the Netherlands received a new impetus in the Summer of 1992, when McKinsey (1993) was commissioned to investigate the needs of the business user community with respect

to the availability, quality and pricing of telecommunications services. The McKinsey Report contained a positive evaluation of PTT Telecom's residential telephone services, but criticised the operator's business services. Both PTT Telecom's domestic and international telephone services were rated as more than adequate and comparatively cheap. McKinsey made clear that service provision to large users was below average[12]. The consultancy firm was also asked by the Ministry to examine the then existing telecommunications policy and to make recommendations about a future organisation of the market. These policy alternatives should be based on increasing service provision to business users, strengthening KPN's position on the international market and ensuring equal access and universal service. McKinsey (1993) proposed four scenarios for the Dutch telecommunications market on the medium term:

- liberalisation of public telephony while preserving the exclusive rights of PTT on the infrastructure: the provision of telephone services on the basis of the public network (leased lines);
- the prolongation of the exclusive rights of PTT on the network and the reserved services, together with government regulation with regard to the introduction of new services, quality of service, tariffing and infrastructural development;
- limited network competition: PTT has an exclusive service obligation for voice telephony and alternative operators are allowed to provide dataservices on the basis of leased circuits;
- free for all competition on the former dedicated markets of network provision and voice telephony.

After less than four years, it became clear that the focus in Dutch policy making had to be shifted from giving priority towards the general socio-economic interest of telecommunications, as expressed in the 1989 Act, to the interests of large business users and the promotion of competition. On the basis of the evidence provided by McKinsey, the Minister argued for the option of *managed competition* between 1993 and 1998, trying to find a balance between state-protected monopoly and free-for-all liberalisation. The public monopoly of the past would be phased out and replaced by an oligopolistic telecommunications market, characterised by new entries and competition between PTT and mobile operators, cable operators, service providers, etc. The basic assumption of the 1989 Act, namely the principle of *unity of control*, was no longer valid. The notion that network management had to be vested in one single entity had effectively been challenged by techno-economic developments and the increasing influence of EC-legislation upon domestic policy (V&W 1993). The PTT-controlled monopoly was increasingly put under pressure by the European Commission, targeting both the liberalisation of the European telecommunications

12 The Report did mention complaints of large users and service providers about high tariffs (mobile communications, leased lines, satellite communications, poor quality of service (the reliability and long repair times of leased lines, inflexibility of billing) and shortcomings in the range of services provided (low degree of network digitisation, restricted supply of leased lines with large bandwidth, intelligent network services, cellular services, ISDN and virtual private networks).

market and the instigation of the relatively detailed Community regulations to ensure open network provision and fair competition, that were imposed on the national levels of policy making.

The Dutch government proposed to introduce network competition by allowing 'private' companies with wayleaves to sell excess network capacity to third parties (V&W 1993). By offering a *premium* for a nation-wide license to provide an alternative fixed network, the Minister intended to stimulate cable operators, Dutch Rail NS and power utilities to integrate their networks and merge their businesses into a new public operator. If this plan were to be approved and implemented, the Netherlands would become one of the few European countries to allow network competition. From 1995 onwards, competition between PTT and a single contender in the provision of leased lines, data services and closed-user group telephony, would then be permitted. In line with the Commission's plan for an Internal Services Market to be implemented by 1998, the government suggested that public voice telephony would remain exclusively provided by KPN in this transitional period. With these liberalisation measures, the Minister clearly responded to the demands of business customers and 'private' operators willing to become the second public operator. The consequences of these far-reaching changes for residential consumers and small and medium-sized businesses were neither investigated nor acknowledged (RCO-CIB 1993, 1994; Consumentenbond 1994). In its quest to increase network competition, the Dutch government itself was strongly involved in the development of this duopoly by protecting KPN and imposing the pre-selected collaboration of semi-public operators to create an alternative provider (instead of organising an open tender). At that time, the Dutch government still controlled KPN and NS Dutch Rail in the capacity of single shareholder and the cable/utility companies (the large majority owned by local/regional public authorities). The government argued that the corporate interests and long-term viability of PTT could be improved by gradually liberalising its critical markets of network provision and basic services, while establishing a transitional duopoly before genuine competition could eventually be introduced. The government assumed that phasing out PTT's exclusive rights before 1998 would have a positive effect on the valuation and floatation of KPN after 1993. The proposed timetable for the introduction of full competition, the government argued, would please and convince (potential) shareholders of the irreversibility of the process of privatisation and liberalisation in the Netherlands (TK 1992/93: 21693/13).

The reactions to the governement's plan were relatively positive. CAPT (1993b, c) and NOTA (1993), two public bodies advising the government on telecommunications and technology policy respectively, welcomed full market liberalisation. They were, however, not convinced about the government's intentions to restrict network competition to a duopoly, and a single contender of KPN, consisting of Dutch public enterprises willing to enter telecommunications. Instead the two advisory bodies suggested a speeding up of decision making and demanded a more liberal approach, emphasising the active promotion of competition, asymmetric regulation that would curtail the incumbent and protect any prospective competitor(s), the establishment of an independent regulatory agency, that would

ensure effective competition and quality of service provision. The CAPT-body (1993b, c) argued that limiting the market to two players was not desirable. Besides nation-wide competition between KPN and its contender, competition at the local level by granting licenses to local and regional operators with only restricted service requirements and/or PTT being prohibited from entering cable distribution. Furthermore, in order to establish workable competition, CAPT demanded that overseas companies should be allowed to invest and participate in the alternative network venture. Given the huge costs of upgrading and integrating these networks, foreign capital and expertise (notably technological and marketing know how) were strongly needed. The public consultative body OPT (1993, 1994) also supported the government's proposals to liberalise the domestic market. A minority of its representatives, including services providers and large users, were against the creation of the duopoly and the obligatory character of the envisaged collaboration between the alternative long distance operator and local cable operators. The decision allow only one competitor next to PTT Telecom and the government-instigated collaboration of power companies, cable operators and the national railways was clearly contrary to establishing fair competition. PTT warned against potential cross-subsidisation practices by the participants in the alternative carrier, channelling their monopoly energy and transport revenues into competitive telecommunications ventures (OPT 1994). Although it agreed that foreign investment in Dutch telecommunications should be permitted, the OPT was internally divided about the issues of asymmetric regulation, the scheduling of the liberalising the voice telephony market (1995 or 1998) and the desirable regulatory framework.

Much like the government, organised business welcomed the promotion of competition as the appropriate instrument to improve PTT's quality of service provision and to increase the overall efficiency of Dutch services' industries. BTG (1993), representing the large business users, complained about the liberalisation plan going not far and fast enough, partly due to the government's slow response and its overly patronising attitude. BTG complained about the lack of urgency and feasibility of the plan to open up the telecommunications market gradually between 1995-98. Given technological convergence caused by digitisation and the absence of an adequate definition of the 'closed user group' concept (i.e. separating private from public telephony), BTG demanded the liberalisation of the infrastructure and service provision as soon as possible (for instance by 1995). The employers association RCO-CIB (1994) criticised the Ministry for underestimating the neglect of foreign participation in the Dutch market, the absence of closed user groups provisions, and the underestimation of the necessity to design a new regulatory regime.

Encouraged by the government to become the single competitor of PTT Telecom, the local/regional power utilities (owning about half of the cable networks) and Dutch Rail decided to join forces and establish the Enertel/NS consortium with the power utilities having a 75 % and the railways a 25 % participation. Instigated by the government's condition to grant the license if nation-wide coverage would be achieved, the power utilities of the consortium started to acquire local cable networks and upgrade their infrastructure in order to make switching possible. The participation of the largest cable operator Casema in the alternative network venture

would be crucial. Although Casema was still owned by KPN, the government announced that KPN should loosen its ties with its subsidiary in order to give nation-wide network competition a chance. Before entering into genuine market competition, Enertel/NS sought temporary preferential treatment on the basis of the infant industry argument to become a full service company providing network capacity and fixed & mobile network services. Enertel/NS demanded from the government a permission for the provision of voice telephony, access to PTT Telecom network on cost-related interconnect charges, asymmetric regulation (a temporary exemption from universal service requirements and ONP-conditions). They also hoped to be allowed to collaborate closely with the alternative cellular operator(s) in order to achieve substantial economies of scale and scope.

Government and Parliament proved susceptible to some of the suggestions provided by the stakeholders (TK 1993-94: 21693/14). The Cabinet, for instance, would permit overseas investment in the prospective second operator if certain conditions were met. Foreign participation would be restricted to 25 per cent and the international operator would be selected on the basis of the reciprocity argument (i.e. the openness of the candidates' home markets). On the basis of these preconditions concerning any future strategic alliance, Enertel/NS chose the US-based BellSouth as their international partner. The evidence for establishing asymmetric regulation for a transitional period was also recognised by the government when it proposed to grant the alternative carrier a license by the Summer of 1995, even if it could not guarantee a nation-wide coverage during the first years of operation. The government was also not necessarily against any business linkage between the prospective second GSM operator and the future alternative network provider. The pleas for speeding up the liberalisation process and installing an independent regulatory agency separate from the ministry were considered understandable but were nevertheless were pushed aside as not being urgent enough. Late 1994, the Ministry was preparing two transitional legislative amendments to allow the issuing of any additional licenses (e.g. Telecom 2) and to include a definition of the closed used group. While the old regime was based on the exclusive right to basic services granted to PTT, the new legislation would be based on a licensing and registration regime for the provision of all telecommunications services to be in line with domestic and European competition policy.

5.6 *The Liberalisation of the Dutch Telecommunications Market*

Introduction

In the new telecommunications setting, introduced in 1989, PTT's public monopoly was reduced to a core monopoly and replaced by a concession-based system. PTT was authorised as exclusive concession holder for the provision of the infrastructure and the reserved telephone, telex, data transmission services on a universal basis, including international service and provide leased circuits to any interested party on request. There were two exceptions on PTT's infrastructure monopoly. Although special licenses were needed to move beyond broadcasting, the operation of local cable networks by municipalities or private companies was tolerated. The 1989

legislation allowed for the establishment of alternative private networks should PTT fail to provide the facilities required or meet the minimal requirements. The interconnection between private and/or cable networks without using the PTT infrastructure, was, however, strictly forbidden. All other telecommunications facilities, value-added network services and terminal equipment could be provided in a free market environment. No licensing or registration regime has been installed for the provision of these non-basic services. From 1991 onwards, measures were taken to liberalise more market segments previously belonging to PTT's exclusively licensed services. For instance, the provision of satellite services (i.e. install, use and operate domestic earth stations) in 1991, the market for datacommunications via fixed links and resale of network capacity was liberalised in 1993. In the markets of mobile services and infrastructure provision competition was established late 1995. Voice telephony would not be opened up to competition before 1998.

The liberalisation of the market for value-added services in the Netherlands has led to an oligopoly. PTT Telecom, together with its partners AT&T/Unisource and Infonet, is one of the bigger players, competing with other strong international players like IBM, GEISCO, Transpac/France Télécom and BT-MCI. In 1993, this market benefited from the liberalisation of datacommunications and the resale of leased lines. For instance, these measures allowed RAM Mobile Data, jointly owned by BellSouth and France Télécom, to become active as the operator of a wireless datanetwork, and enter competition with PTT Telecom in the cellular market niche. In the market segment for (international) datacommunications, large foreign operators and resellers such as Esprit Telecom are building up a presence in the Netherlands. These contenders are increasingly bypassing PTT's public network by rerouting traffic through their world-wide networks of leased circuits. So far the position of PTT Telecom in the liberalised telecommunications market has been stronger than was originally expected in the pre-1989 discussions. After a brief discussion of the changes in the equipment market, we will discuss in more detail how PTT successfully attempted to expand its public monopoly in the newly emerging markets of tele-information services, cable networks and cellular services.

The Liberalisation of the Equipment Market

Traditionally, the provision of telephone equipment has been a PTT monopoly. The terminal equipment PTT rented to its customers and the network switches were purchased from its preferred suppliers Philips, Ericsson and ITT/NSEM, with Philips being the dominant manufacturer. With respect to switching equipment AT&T, (after taking over the Philips subsidiary), held more than 50 per cent of the market, with Ericsson and Alcatel (having acquired ITT/NSEM) making up the other half (PA 1991/2). The market for switching equipment was a highly sensitive market where the political interests of supporting the domestic industry often prevailed over the efficiency arguments of foreign competitors and the corporate interests of PTT. An illustration of this is the announcement by the government in 1984/85, that three manufacturers would be selected to upgrade and digitise the public infrastructure. PTT had asked for only two suppliers of digital switching equipment, notably

AT&T/Philips and Ericsson, but the government decided to add ITT/Alcatel to the list, fearing the closing down of its Dutch subsidiary. Ten years later when PTT finally had achieved corporate autonomy, the Alcatel-ITT agreement was reversed: PTT Telecom decided to drop Alcatel as major supplier (with the exception of GSM equipment).

In the mid-1980s the terminal equipment market was severely challenged by cheap non-approved equipment imported from the Far East. Today this liberalised market is still dominated by PTT: its share in the PABX-market has decreased to about 50 per cent, but none of its competitors hold a market share of more than 10 per cent (Telecommagazine NL 1992/4). In the post-1989 situation, PTT benefited from a clear bias in the liberalisation measures of the terminal equipment market in favour of the former monopolist by being allowed to remain actively involved in the testing and certification of terminal equipment. PTT was privileged because it automatically received the required approval of equipment to be sold or rented, while its competitors had to rely on time-consuming procedures at the recognised testing agencies and long delays before the actual certification was given. The departmental agency HDTP, the notifying body in telecommunications normalisation, had delegated the task of type approval to the designated bodies KEMA and the PTT subsidiary NKT/PTT Contest, while also recognising the EC-certification agencies. Whether this situation with respect to PTT being player and referee at the same time will become more controllable with the recent agreement to merge NKT and KEMA into one certification agency, called Telefication, remains to be seen. After establishing a chain of retail outlets of its own, notably the Primafoon shops & Business Centers, PTT Telecom established a dealer network in the terminal equipment market. As officially registered distributors of PTT Telecom, former competitors could receive all the information and cooperation needed for the installation and maintenance of network connections and the necessary terminal equipment.

The Liberalisation of the Market for Tele-information Services

From the late seventies onwards, when universal service began to be realised and the telephone market reached its saturation point, PTT decided to upgrade and extend its network by incorporating technological innovations and to sustain its growth by offering new facilities such as a public datacommunications network DN-1 and tele-services like videotex and electronic mail. PTT concerned itself with the question of securing its long-time unchallenged monopoly and enlarging it by operating these advanced services. PTT was asked by government to take the lead in experimenting with new services and to pave the way for private enterprise. In practice, however, its role was either so dominant or ambiguous that potential competitors did not have a fair chance. The development of videotex in the Netherlands was heavily influenced by the strong position of PTT and the passive attitude of the publishers, the computing industry, service providers, cable operators and the equipment industry (Bouwman & Hulsink 1992). PTT claimed a leading role in the experiment with videotex by playing the roles of network provider, service operator and information supplier. With regards to the role of network provider, there was no doubt that PTT

should orchestrate and control the development and diffusion of videotex. The role of service operator caused more problems: PTT, the public broadcasting organisation NOS, the publishers and other information providers all made a bid for this part.

Videotex was first introduced in the Netherlands in 1978 with the Cabinet sanctioning a request from PTT to start an experiment with videotex, called *Viditel*. The government had stipulated that the experiment should be accompanied by a *Steering Committee*, chaired by Mr Zoutendijk (a former senior executive of a large insurance company and an expert in technology policy), that should examine whether videotex fell under the scope of telecommunications (as a tele-service) or broadcasting regulations (as a cable system). After a reshuffle of its first line up (almost completely dominated by public authorities), the Zoutendijk Committee included the following stakeholders: the PTT, the Ministry of Welfare, Health and Cultural Affairs, the Home Office, the Ministry of T&PW, the public broadcasting organisation (NOS), information providers (trough their VNVI association), publishers (through their associations KNUB, NOTU and NDP), the national consumer organisation and the Union of Journalists NVJ.[13] Hardware and software suppliers were not represented. The aim of the Steering Committee was to monitor, supervise and evaluate the videotex-experiment with respect to the regulatory, technical, ergonomic and socio-economic aspects of videotex and offer advice on whether Viditel should be introduced (Stuurgroep Viditel 1982). Although the pilot experiment yielded a wealth of information about the technological, legal, commercial and sociological aspects of tele-services, the main question -whether or not to continue the Viditel experiment - could not be answered by the Committee. PTT's high growth expectations with more than 100,000 subscribers by 1985 were tempered by the Committee's estimate of 75,000 or less. The rather disappointing results of the experiment were blamed on the high costs and the lack of quality of the information provided. The Committee's major complaint was that the wrong target groups had been selected: the demand for videotex in the consumer market was low compared to the more promising business and professional markets. In spite of the disappointing results and the tempered expectations about the future market growth, the Zoutendijk Committee urged a definitive implementation of Viditel because other countries would continue in this field and the Netherlands would find itself lagging behind (Stuurgroep Viditel 1982). The Committee explicitly regarded videotex as belonging to the telecommunications domain and stressed the importance of self-regulation and consultation between PTT and the information providers for the provision of electronic information without government interference. A special Viditel Council could be installed as a consultative platform through which PTT and other stakeholders would discuss and set rules with respect to issues such as tariffing, advertising, codes of conduct, investment plans, and quality of information.

When the experimental stage was completed in 1981 PTT decided to continue with Viditel, without waiting for the recommendations and expected approval of the

13 The first line up of the Steering Committee featured the following institutions: PTT, the Ministries of Home Affairs; Justice; Education & Sciences; Welfare, Health and Cultural Affairs; Transport & Public Works; the National Broadcasting Organisation and the Modern Media Foundation. Here the second line up of the Steering Committee is given.

Zoutendijk Committee. PTT (1983) argued that it was necessary to follow international developments and obtain strategic information about the promising tele-services market. Consequently, PTT switched its marketing effort from the consumer market to the more viable markets of information-intensive and professional services. The publishers were irritated by PTT's leading and privileged position and distanced themselves from the Viditel project. Their reaction to the results of the experiment was clearly one of disappointment (NDP 1982; KNUB 1982). The enthusiasm of the publishers for Viditel had cooled down as soon as they realised that because of the slow penetration of videotex and its uncertain market potential their investments would not pay off. The information providers, organised in VNVI, complained about the obscure position held by PTT and the conflicting loyalties that had emerged in the development of videotex. PTT was making up the rules of the Viditel-game unilaterally, whereas it was at the same time constrained by governmental restrictions with regard to investments, tariffs and partnerships. VNVI argued for a clear separation of responsibilities within the PTT-administration regarding the public utility function and the enterprise function of exploiting tele-services (VNVI 1981a, b).

In the *1984 Viditel White Paper* the government endorsed the positive advice of the Steering Committee concerning the introduction of videotex, without taking into account the disappointing results of the experiment and the reservations of the Committee (TK 1983/84: 18368). It stated that the ultimate decision in favour of implementing videotex was influenced partly by the fact that the Netherlands could not afford to stay behind and had to build up a strong position in telematics. The government's aim was to stimulate Viditel by enlarging the responsibility of PTT, whom it had asked to pave the way for both the business and consumer markets by developing and promoting new services. The alternative of allowing new entrants and promote market competition was not considered. The Committee's recommendation to establish a Viditel Council to consult users and information providers about technological, economic and regulatory aspects of videotex was not seen as necessary and desirable by the government. A framework of self-regulation and bilateral negotiations between PTT and other parties was though to be sufficient. The White Paper received hardly any opposition in Parliament and was widely accepted.

The new Viditel strategy followed by PTT, focusing on the more promising professional and business markets, led to a moderate growth in the number of subscribers and services provided through the system. Subscription grew from 11,000 in 1984 to a mere 27,000 subscribers in 1987 and even fell to 23,000 by 1990. The results of Viditel were, however, still far from satisfactory.[14] In addition to the initial losses to be expected in infant industry, there were also unexpected costs, caused by the poor matching of technology and marketing, and inadequate management information concerning market and service developments. The official introduction of Viditel in 1984 was followed by the development of other competitive initiatives with videotex. In the mid-1980s, the large publisher VNU became involved in two experiments with

14 The National Audit Office calculated a loss of around Dfl 287m between 1980-1987 due to the introduction of new services. Viditel, Memocom (electronic mail), DN-1 (datatransport), cellular communications had been loss-making, only the audiotex services had turned out to be profitable (TK 1988/89: 21080/1-2).

the provision of tele-services through cable networks (Ditzitel Amsterdam and Totaalnet Zuid Limburg). VNU wanted to extend its stronghold in traditional publishing to the development and diffusion of new media and electronic publishing (VNU 1982). VNU's ambitions were hampered by a restrictive telecommunications and media legislation, effectively protecting the public monopolies of PTT and the public broadcasting organisation. For example, PTT simply turned down an offer from VNU to harmonise the two videotex systems Viditel and Ditzitel (Slaa 1987). When the lack of demand proved another setback in the effective diffusion of new electronic media in the consumer market, VNU withdrew from the videotex market all together.

Simultaneous with the Viditel and Ditzitel trials, there were other local/regional experiments (such as Totaalnet, Telematica Infostructuren and Infodam), in which PTT Telecom was involved. As in the case of Viditel and Ditzitel, the commercial results of these initiatives stayed far behind the high expectations, and some of them were never realised. After the growth of Viditel slowly slackened, PTT, supported by the Ministry of Economic Affairs and potential investors, asked for more harmonisation between the various experiments. After more than ten years of trial and error with videotex, the parties involved realised their interdependence with respect to technological diffusion, investments, service provision and marketing. A more or less established pattern of cooperative relationships between Viditel and the other experiments has emerged in 1990 through the integration of the various systems into the system integrator Videotex Nederland VTX. The newly established VTX-system (in which PTT initially held a 30 per cent share) provided a fully transparent network environment in which providers could deliver their information services in one general format, while the system operator VTX took care of transport and network management.[15]

In coordinating these experiments, PTT was referee and player at the same time: in addition being a neutral network operator and providing the billing functions for the various videotex systems, it still had the operational Viditel-system as well. In 1991, service providers complained about market competition being distorted through cross-subsidisation of strategic information between PTT's public and commercial functions, restrictions in the use of its infrastructural facilities and extremely high payments for use (NVI 1991). In order to prevent a bypass of its infrastructure, PTT restricted the use of facilities by third parties and exacted high payments for the use of its network. It was argued that this would hamper a cost-effective exploitation of tele-services and have a detrimental effect on the investments and (potential) profits of service providers. PTT responded to the demands of NVI by lowering some of the charges and introducing a tariff differentiation scheme. In 1994, when VTX had not yet achieved its break-even-point, the situation once more became time critical, when two large information providers, the Postbank and the RABO Bank announced, they would no longer utilise the videotex network and decided to provide their telebanking services via other means. The announcement of VTX to provide gateways to and integrate its services as a

15 The shareholders in VTX NL are PTT Telecom 20 per cent, the institutional investors ING Bank, KLM Pension Fund and Rabobank with 20 per cent each, Intelmatique (a subsidiary of France Télécom) 11 per cent, and Getronics (automation company) and VECAI (the branch association of cable operators), together with 9 per cent.

subsystem of the Internet may well be the final chapter in the history of videotex in the Netherlands.

Network Integration or Network Competition?

The Dutch telecommunications system contains two separate local infrastructures: a PTT-controlled system and (until recently) an extensive, decentralised and poorly interconnected network of more than 1000 cable systems, controlled by municipal authorities and operated by regional public utilities or private cable companies. Due to an obscure formulation in the 1904 T&T Act, municipal cable networks were not part of the PTT monopoly (Hins 1991). The installation and exploitation of these local networks was solely allowed for broadcasting on the basis of an exclusive authorisation given by PTT.[16] For new interactive services, like videotex, pay-per-view, telemetry, alarm systems and the likes, a special franchise was needed. Only a few of these licenses were granted to cable companies (mainly for experimental purposes). PTT determined the technical conditions cable networks had to meet and exclusively provided the broadcasting signals for the distribution to customers and as well as the interfaces between these local cable networks. Although the penetration rate of cable in the Netherlands is high (about 90 %), there was little or no harmonisation of standards in the national cable system. Furthermore, the legislative regime prohibited any collaborative efforts among these local monopolists, and PTT was reluctant to furnish licenses for the provision of non-broadcasting services distributed via cable. PTT regarded the cable system as belonging to its public monopoly and was eager to control this part of the telecommunications infrastructure as well. To that end, PTT had established Casema, that as a private cable operator had become actively involved in that cable market.

Originally the two local networks were different in their technical specifications, communication patterns, regulation and use. As a consequence of technological developments (digitisation and the diffusion of optical fibres) and an increasing demand for tele-services, however, the evolution towards one integrated broadband communications network was regarded as inevitable. After the first clash in 1974, the political discussion on the degree of technological and managerial convergence between the two local networks started anew in the early 1980s when it became clear that advanced cable networks could also be used for services other than broadcasting, like interactive teleshopping and telemetry services. After the Swarttouw Committee and the 1984 White Paper had suggested further research on the subject of infrastructural coordination, the Cabinet in 1985 announced the installation of an advisory committee dealing with the investigation of harmonising the cable and the local PTT-networks. The Committee, named after its chairman Mr. Zegveld (then Director of the Centre for Technology and Policy at the Netherlands' Organisation for Applied Scientific Research TNO/STB) was asked to investigate the possibility and desirability of an integration of the two separate local infrastructures into a single

16 PTT managed to keep network design and development under control: it effectively promoted a tree and branche architecture for cable networks and prevented the implementation of switched star topologies and direct interconnection between local cable systems (Schrijver 1983: 87/88).

one controlled by PTT and to give policy recommendations on its implementation (Commissie 1986). The Committee was composed on a representational basis and included the Ministry of Economic Affairs, the Ministry of T&PW, the information providers (V)NVI, the suppliers of cable equipment VEFICA, the suppliers of telecommunications equipment NETELCOM, the cable operators VECAI, and the Union of Netherlands Municipalities VNG.

In 1986, the Zegveld Committee advised in favour of the future harmonisation of the two local communications infrastructures into one integrated broadband network to be controlled by PTT (Commissie 1986). In its plea for network integration the Committee was led by the techno-economic considerations of economies of scale and scope and by optimism concerning the large-scale diffusion of fibre optics and eventual technological convergence. The low costs of a universal network and high-capacity optical fibres would enable a cost-effective exploitation of cable television and facilitate the promotion of tele-services. The modernisation and enlargement of the two existing networks without at the same time integrating them would lead to notable losses of capital. The Committee concluded that PTT should be allowed to integrate all the cable networks into one fully-controlled local infrastructure within a 20 years time frame. The development towards an integrated broadband system and the transfer of the cable networks to PTT should be given a flexible legal basis, taking into account local conditions and possibilities. The timing of these take-overs could vary from one cable network to another, depending upon the necessity for and financing of infrastructural investments and the depreciation schemes of the cable network. In order to coordinate the replacement of the local infrastructure over different time spans and facilitate mutual adjustment between PTT and cable operators, the Committee demanded an institutional framework of various committees at local, regional and national levels with sufficient public and private support. The Committee also proposed that the government facilitate the collaboration between PTT and the group of cable operators by a financial contribution of NLG 600m and the creation of a broadly represented national Steering Committee. The Zegveld report sounded rather optimistic, but it nevertheless made a few reservations, which later turned out to be crucial. Taking into account a future that would be characterised by privatisation and liberalisation, the Committee argued that guarantees had to be given that an independent PTT could and would play an active role in the process of harmonisation. Another critical remark was that some of the cable stakeholders might have been reluctant to commit themselves to the integration project: they could play the waiting game, hesitate or even cease to make the necessary investments in the cable infrastructure. To combat such a risk, the Committee asked for an immediate political reaction.

The response to the Zegveld report was mixed (TK 1987/88: 20497/1-2). PTT, supported by its subsidiary Casema, reacted positively to the recommendation for an integration of the two local infrastructures under its exclusive responsibility. Despite this, PTT dismissed the Committee's proposal to install a framework to coordinate the integration process as too complex. PTT felt that bilateral negotiations with the cable operators would be more appropriate. The cable equipment suppliers agreed with the proposal for future integration to be controlled by PTT and for obvious

reasons, expressed a preference for a step-by-step approach involving several experiments with interactive cable services. The information providers asked for a clear separation between the public utility and competitive functions of PTT and measures aimed at stimulating the market for tele-services and strengthening the position of the information providers. The think-tank of organised business CIB-RCO (1987b) criticised the Zegveld report as being too absolute in its 20-year integration path and thereby overlooking major uncertainties in the telecommunications environment in terms of technology and market demand and the envisaged privatisation of PTT.

The Report was not approved by the *cable lobby* of the municipal authorities and cable operators, who complained that it failed to give them sufficient commercial opportunities. The Dutch municipalities and cable operators, represented by VNG and VECAI, stated that the report was one-sidedly technical and had a clear bias towards PTT. VNG-VECAI (1987) agreed with the techno-economic necessity for the integration of the local PTT infrastructure and the cable networks and to work out plans and scenarios for the future (together with PTT) and to initiate pilot experiments. VNG-VECAI argued that a future PTT monopoly should be restricted to control over the infrastructure. The provision of services should be excluded from this. In view of these future developments a conveyance might be desirable out of techno-economic reasons, but to formulate the conditions for an administrative integration of the networks at this early stage would be premature. The Committee had not taken into account the fact that a broad variety of interactive cable services could be realised with the existing local cable networks by way of a hybrid system using the PTT and the cable infrastructure. According to VNG-VECAI, the Zegveld report was too technocratic and too centralist (in other words: too PTT-dominated) to cope with the local variety and differentiation of cable networks, and it overestimated the readiness of cable operators to invest in their networks. A future conveyance of their networks to PTT would discourage operators to upgrade their network and this would seriously hamper the diffusion of new services.

In 1988 the *White Paper* on the Zegveld recommendations was presented to Parliament. The government made it clear that the large-scale harmonisation of the local infrastructure required a balanced approach, which had to look beyond the technical aspects. A broad socio-political support and flexibility to deal with local circumstances was needed as well (TK 1987/88: 20497). The Cabinet stressed that a duplication of the local infrastructure should be prevented and network integration ought to be achieved in terms of its technical aspects, economic control and regulation. Like the Zegveld Committee, the Cabinet expected that in the long term an integrated broadband communications network would take shape, in which the distinction between the PTT and the cable network would disappear. This future broadband network should be part of the exclusive concession given to the PTT. Although the cable operators would lose their license to operate the cable network in the future, the Cabinet suggested that the cable operators could provide broadcasting and broadcasting-related services. Although the Cabinet found it premature to give a verdict on the techno-economic scenario for network integration as proposed by the Committee, the period for the conveyance of the cable networks was reduced from

twenty to twelve years. The Cabinet stated that the Committee had put too much emphasis on central bargaining between the government, PTT and cable operators/municipalities. Rather than opting for an overarching semi-governmental framework, the Cabinet argued for a more passive role of the government by delegating essential tasks of telecommunications policy (i.e. achieving network integration, setting a timetable and agreeing about a take-over price) to the two major stakeholders in the process, namely PTT and the association of cable operators VECAI. The government also refused any financial participation in the process of network integration. The financial burden of the operation should be carried entirely by the local cable operators and PTT.

In 1989, PTT and VECAI started bilateral negotiations to work out a joint approach to the integration of local networks, dealing with such issues as the planning of the conveyance, compensation and the promotion of and control over the exploitation of new tele-services at the local level. These discussions gave way to laborious negotiations concerning the conditions and control of providing these services. The cable operators, supported by the Liberal-Conservatives in Parliament, found the authorisation regime of the PTT too restrictive for the development of new tele-services (VECAI 1990; TK 1989/93: 21422). The government decided to make the licensing of cable operators to provide new services dependent upon the collaborative plans of PTT and VECAI. By linking the issue of franchising to laborious negotiations between the two stakeholders in the network market, the already restrictive cable regime with respect to the provision of tele-services became even more constrained. Whilst PTT was allowed to provide all the various services, the cable operators were excluded from the supply of voice and data-services and were only allowed to provide tele-services after being authorised by PTT. VECAI attempted to balance technical integration and cable liberalisation by promoting some kind of collaboration with PTT, while at the same time preventing a take-over of their local networks. The cable operators were, however, internally divided. The smaller municipal operators were in favour of selling or contracting out their networks to KPN/Casema, while the larger cable operators demanded a more liberal approach towards the operation of cable networks. In 1991 the PTT-VECAI negotiations collapsed. VECAI found it impossible to accept the idea that network distribution and the exploitation of interactive broadband services would fall exclusively within the parameters of PTT and make it virtually impossible for cable operators to move into new businesses. According to the cable operators the control of PTT should be restricted to network provision for broadcasting purposes, while new interactive services should be left to others. PTT insisted that a local broadband communications network ought to be centralised under its exclusive control. Subsequently it has taken over several cable networks and entered into strategic partnerships with other cable operators and potential operators. Another factor that has surely contributed to the breakdown of negotiations is the increasing influence of EC legislation upon domestic telecommunications policies between 1988-91 and the market and regulatory uncertainties it triggered. For instance, the Dutch strategy of network integration was necessarily going against the deregulation trajectory as developed by the European Commission. At that stage the Commission sought to

liberalise terminal equipment and value-added services and to regulate the remainder of the industry through ensuring open network provision without yet touching upon the critical market segments of voice telephony and network provision.

Besides the fact that huge investments were needed to upgrade the infrastructure, the Dutch cable sector suffered from political intervention, internal fragmentation and lack of a market responsiveness (Weijers & Leyten 1994). In order to strengthen its market position, VECAI (1990) demanded a liberalisation of the cable market and a cutting back of detailed political interference at both local and national level. In 1992-93 the major cable operators established the ADEM-venture, a platform for the harmonisation of network access conditions and standards for the future provision of various interactive tele-services. An impediment to create a domestic level playing field was the prevailing legislative restriction for cable operators to provide non-broadcasting services (e.g. datacommunications and tele-services) to businesses and households. In the Spring of 1993, however, the government took the decision to liberalise the cable regime in the near future. From 1994 onwards, cable operators were permitted to collaborate and merge their networks and were allowed to offer interactive applications and data services (with the exception of network provision and voice telephony to be liberalised by 1995 and 1998, respectively). The efforts of the cable companies to develop some form of regional collaboration and eventual network integration might seem promising, but there is still a long way to go before they will be able to compete effectively with PTT. A strong concentration trend emerged in the Dutch cable sector between 1992-95, when several municipalities sold their cable networks to the power utilities, Casema and PTT Telecom. In 1994 Casema (market share 17 per cent) acquired CAI-NKM (one of the larger cable companies with a market share of 5 %. Through a direct participation in the ADEM-project by Casema, PTT was in effect able to control and prevent any serious competition from the dispersed cable community. As a consequence of the ambiguous role played by Casema, at the same time working together with KPN, Philips and Graff by experimenting with pay-tv, the ADEM experiment was terminated at the end of 1994. Under strong domestic political pressure, both from the national and EU authorities to establish network and services competition, KPN/PTT has announced that it will reduce its majority share in Casema. Unwilling to give up complete control over Casema by selling off any shares of Casema, KPN has suggested that it will give up direct control by encouraging the establishment of joint ventures of Casema with local/regional cable operators and service providers.

Another serious impediment to the development of network competition is the growing presence of PTT in cable television distribution and the expansion of its overall position in the broadcasting communications market. In 1993 PTT Telecom launched an ambitious Masterplan to construct an optical fibre network to upgrade and expand its infrastructural capacity ('fibre in the local loop') and invest millions of guilders in a future broadband 'feeder network' for cable tv distribution. This broadband video network will make the receiver facilities of cable networks redundant and create a virtual national cable network, linking all local cable tv networks. Kemme (1993) unravelled the strategy behind this plan as a 'vendors lock-in', discouraging or preventing cable operators from coordinating and/or integrating

their infrastructures. With Philips Media, KPN and its subsidiaries Casema and PTT Telecom, are broadening its operational base to include not only the distribution, but the programming and provision of interactive broadband services (e.g. pay-per-view, videophony and video-on-demand). KPN/PTT has started experimenting with compression techniques to transmit video services over its narrowband infrastructure. In order to compete effectively with PTT, the VECAI association argued that cable operators should be given permission to diversify into full-scale service provision and establish collaborative arrangements linking and integrating their local networks (Eenhoorn 1994).

In her outline to introduce network competition by 1995 and establish a fully liberalised services three years later, the Minister argued that a balance had to be found between the interests of the incumbent PTT, private operators (like cable companies, utilities and others), and large business users (V&W 1993). The competitive position of PTT Telecom could be strengthened by the implementation of a step-by-step liberalisation. At first, network competition between the incumbent and a second operator, consisting of the utilities, Dutch Rail and cable operators, would be allowed for a fixed period, to be followed by the full liberalisation of the telecommunications market (including voice telephony). The creation of a transitional monopoly would allow PTT Telecom sufficient time to adjust to a deregulated market and finish off tariff rebalancing. The protection PTT's competitor would receive from 1995-98 in the envisaged duopoly was also aimed at stimulating the utility companies to become fully active in telecommunications by operating networks and providing services. The Minister intended to stimulate the collaboration and integration of these companies into one consortium by granting only nation-wide license for operating telecommunications services (with the exception of voice telephony). It is somewhat ironic that cable operators, utilities and other private operators, whose attempts over many years to liberalise the network regime to provide tele-services and network capacity failed, are now more or less forced by the government to merge and compete with PTT. Perhaps finally network integration might be traded in for network competition.

The Market for Mobile Communications

In the early 1990s the Dutch cellular market was relatively underdeveloped with a low market penetration, overcharged pricing, and faults in service provision. Like Belgium and Italy, the Netherlands have been slow in opening up the market for mobile communications. This was partly caused by a hesitant and protective government, insufficiently aware of the economic benefits of mobile communications and the positive effects of competition upon overall productivity and efficiency levels (Slaa 1993; PA 1993). PTT Telecom has also been relatively slow to realise the market potential of cellular technologies (BZW 1993; ABN AMRO 1993; McKinsey 1993). The reasons for this are manifold: bad marketing (one-sidedly concentrating on car telephony), poor quality of service, lack of price differentiation, and a go-it-alone strategy regarding sales and service provision. It was only in 1993 that PTT Telecom extended service provision to third parties, like the retailers Martin Dawes,

Debitel, and Talkline, and established a network of retail outlets for the sale of cellular equipment. One year later, PTT introduced a more flexible tariffing structure, based on varying combinations of subscription, usage and territory. Instigated by the liberalisation proposals of the European Commission and the fear of losing the country's competitiveness, the Minister and the relevant policy community were persuaded to replace the public monopoly on mobile communications by a more open mobile market in 1992. The political process lost momentum and came to a complete standstill one year later. Only in 1995 a cellular duopoly was established, in which a second operator competes with PTT, and new licenses for paging and other mobile services have been franchised. It took more than two years to reach a parliamentary agreement concerning the legislative proposal to allow competition between PTT and a contending cellular operator. So far decision making about the opening up of mobile communications (GSM) has been characterised by slow responsiveness and strategic neglect (the government), tactical manoeuvring (PTT) and delays caused by interdepartmental clashes and legal-administrative dismissal.

The political process to liberalise mobile communications started in July 1992, when a provisional agreement was reached between the Ministries involved over an entrance fee for the two GSM-providers of NLG 40m for the second licence. In the established legislative framework, cellular communications belonged to the reserved transport services and to grant additional licenses in the provision of mobile services, an amendment of the 1989 Telecommunications Act was needed. Initially, PTT strongly opposed these new liberalisation proposals by arguing that the country was too small for more than one operator and that neither its investments in analogue mobile facilities nor the initial losses were not fully recovered. While attempting to delay institutional change PTT at the same time started to upgrade its analogue mobile network by preparing the 'roll out' of its digital GSM-network. At the end of 1992 the Minister drafted an amendment to enable the opening up of the mobile communications market by suggesting the installation of a licensing regime. Two licenses with a duration of fifteen years would be issued: one would be automatically reserved for PTT Telecom (on the basis of its exclusive concession on the provision of reserved services), while the other would be awarded through a public tender procedure. After being informed about the prosperous prospects of mobile communications, the Treasury demanded a rise in the entrance fee to NLG 500m. The Treasury was very much keen on the windfall profits of selling mobile telecommunications licenses for balancing the budget. The Ministries of Economic Affairs and T&PW, backed by organised business, were strongly against such a high entrance fee. The two Ministries argued that this would be ineffective for an infant industry like mobile communications and would furthermore seriously damage the competitive position of Dutch service industries in general.

After almost a year of departmental conflicts in the Spring of 1993, another agreement was reached between the Treasury and the two other Ministries involved to abolish the entrance fee proposal and to levy an additional 7.5 per cent profit tax from the two operators after they have installed their mobile networks properly. Although a broad consensus was developing about opening up mobile communications for competition, it also became clear that crucial issues like privacy,

fair competition, access charges, and interconnectivity still needed administrative settlement. Given the fact that the second GSM operator would be quite dependent on PTT Telecom for interconnections, prospective mobile operators feared that without a clear organisational separation of PTT Telecom's fixed network and mobile activities, a level playing field could not be established. Their proposal that PTT Telecom had to establish a legally separate company for operating its GSM license was not taken over by the Minister, however. Another problem that complicated the introduction of the legislative amendment to Parliament, was the desire of the Ministry of Justice to be able to eavesdrop on GSM conversations. This would require expensive additions to the standard technology, for which the relevant judicial authorities wanted the network operators to pay. Potential candidates for the second license, as well as PTT Telecom and industry associations, forcefully lobbied against this idea, but could not block it effectively. The legislative proposal for a mobile communications duopoly suffered another setback when in the Summer of 1993 the Council of State gave a negative advice about the legislative amendment. The Council of State argued that the proposal to impose an additional profit tax on the domestic GSM operators would go against Internal Market rules. The consultative body OPT (1993) argued that a duopoly model could easily instigate anti-competitive practices and collusion between the two operators. In case workable competition did not emerge, OPT suggested the possibility to allow market entry for a third player. OPT strongly suggested an active role for the government in advancing competition in the cellular market by ensuring access to the fixed infrastructure and observing interconnection agreements between the licensees. Like the Council of State, OPT was also against the proposal of a 7.5 per cent levy on the profits of the two license holders. Such a profit tax would be included in tariffing, passed on to consumers and lead to higher charges, and it would also hamper a rapid development and diffusion of cellular technologies.

In 1994 the government decided to abandon the profit tax measure and to replace it by a virtually negligible fee to be paid by the two licensees, that basically included administrative charges. As originally suggested by RAPT (1992a, b) and CAPT (1993a), the new justifications for a levy recognised the regulatory responsibility for the government in frequency allocation and some economic compensation for the usage of scarce frequencies. After several years delay, the new legislative amendment was discussed in Parliament between 1993-94 and finally adopted in the Summer of 1994. The assignment of the second license was made official Spring 1995: the MT-2/Libertel consortium was granted the second GSM-license, allowing it to start with the construction and operation of an alternative mobile network.[17] This duopoly to be operational and competition developing, is not envisaged before 1996. With PTT Telecom's present *de facto* monopoly on analogue mobile communications and the initial build-up period of an alternative digital cellular network, PTT will

17 Five consortia were bidding for the second GSM license, namely Mobined (RABO, Getronics, Bell South, LCC, Schiphol Airport), GSM Nederland (Deutsche Telekom Mobil, MSI, De Telegraaf, RCC, GSM Bouwcon, Fortis AMEV), MT-2/Libertel (ING, Vodaphone, Vendex, Internatio-Müller, LIOF), Nedcell (Telecom Finland, Lacis) and NL-Tel (ABN-AMRO, Airtouch/PacTel, C&W, Heidemij, Nuon, Radio Holland Electronics, NIB).

have substantial first-mover advantages and take up a considerable market share, while serious competition might only occur in the medium term. Given the low levels of market penetration the duopoly will at first generate non-zero-sum benefits for the two cellular operators. Furthermore PTT initially benefits from all mobile traffic including flows from its competitor, which is routed through its fixed infrastructure. With the envisaged arrival of a second fixed infrastructure provider, this one-sided dependence might eventually disappear.

5.7 *The Privatisation of KPN/PTT Telecom*

In 1989 the new public limited company KPN Royal PTT Netherlands became the largest private employer in the country with a workforce of 100,000 of whom about 30,000 were PTT Telecom employees. After having been given access to the capital market, the improvement of KPN's financial flexibility has led to a steady increase of investments in the telecommunications and postal infrastructures to annual levels of about NLG 3.5b. KPN transformed itself effectively from a government bureaucracy into a commercially-driven company with a stronger focus on various product/market combinations. KPN has developed into a transnational multi-media conglomerate by safeguarding its dominant position on the Dutch information and communication markets, while at the same time building up a strong world-wide presence through establishing a chain of sales offices and linking up with international partners. In 1994 KPN had a turnover of about NLG 19b with operating results at NLG 3.5b with PTT Telecom accounting for 68 and 83 and PTT Post 31 and 16 per cent of KPN's total revenues and profits, respectively.

The public offering of a minority of KPN-shares in 1994 was the final step in the privatisation process, that has transformed the pseudo-privatised state-owned corporation into a normal joint stock company listed at the Stock Exchange. In order to become more efficient and effective in the market place and more attractive for potential financial investors, KPN/PTT started a rationalisation programme of substantially trimming overhead and labour costs and entered into international strategic alliances. The successful corporate development of KPN clearly benefited its single shareholder, the Dutch government, through the annual contribution to the Treasury (dividends and taxes) rising from NLG 1.5b to NLG 2.3b between 1985 and 1992 (PTT/KPN Annual Report). The government must have been pleased with the effect of KPN's internal efficiency and commercial successes, increasing the company's value at the moment of floatation. Before the public offering, financial investors estimated that KPN's value lay between Fl 12 and 28 billion. For instance, ABN AMRO (1993) and BZW (1993) mentioned KPN's market-responsive strategy, its flourishing results and the socio-economic geography of the Netherlands ('Entrepôt of Europe and Gateway to Europe'), all of which would eventually contribute to a successful privatisation. Referring to the government's decision to sell off a minority of the KPN-shares, the valuation could be negatively influenced by the PTT Post subsidiary, that together with the commercially more attractive PTT Telecom branch, would be included in a floatation of the integrated holding company. When compared to the profits and revenue levels of PTT Telecom, PTT

Post surely fell behind, but it was then one of the very few profitable postal administrations in Europe, relatively efficient and with high service levels.

According to the 1989-legislation the government was allowed to sell off only a minority of the KPN-shares (49 per cent). In the Summer of 1993, the Minister announced that between 1994-1998 a majority of the shares (varying between 51 and 70 %) would eventually be sold on the Amsterdam Stock Exchange. The state would retain about 30 per cent in the newly privatised company. Notwithstanding the fact that the Cabinet has dropped the claim to keep more than 50 per cent, a set of protective measures has been built into the floatation procedure to leave the government's controlling interest untouched and to prevent a hostile take-over. The persistent influence of the government in a future privatised KPN is ensured through the issue of certified shares ('prefs'), and the creation of a *golden share*, referring to the power to block changes in certain articles of association and granting the government the right to appoint three of the nine directors. In practice, this means that for critical policy issues, like the sale of a new tranche of the shares, the formation of strategic alliances (mergers or take-overs), large investments, and substantial tariff increases, KPN needs permission from the central government. In June 1994, the government sold about 30 per cent of the KPN/PTT shares on the stock market. Shortly before the public offering, the pay out ratio was increased from 40 to 50 per cent to please potential investors and therefore promote the overall sale of shares. The centre-left government furthermore facilitated the purchase of shares by KPN-staff and small investors by underpricing them and giving particular 'sweeteners' (i.e. a discount) to private shareholders. The revenue of the sale was approximately NLG 6.8b, with roughly a third of KPN's total workforce (i.e. 31,000) acquiring shares. In 1995, the second tranche of KPN-shares was sold, herewith reducing government ownership to 45 per cent and raising another NLG 5b for the Treasury. The government agreed that the revenues generated by the floatation would be used to reduce the relatively high public deficit and to strengthen the country's economic structure through infrastructural investments. Like before, KPN proved a useful instrument to accomplish the government's fiscal objectives: the 'windfall profits' of the sale of KPN/PTT shares were, like before, used to balance the budget.

Changes in the Internal Organisation of PTT Telecom

In 1994 PTT Telecom had a turnover of about NLG 12b, pre-tax results of NLG 2.9b, net results of NLG 1.4b, and a rate of return of 13.5 (see table 5.1). Despite competitive constraints in some of its markets, PTT Telecom's turnover and profit levels increased in most of them (with the exception of emerging markets and equipment sales that went down dramatically). The initial results of the internationalisation strategy of PTT Telecom were somewhat disappointing. The large majority of PTT Telecom's revenues (more than 80 per cent!) is still generated by the provision of its exclusively licensed services. The results of the domestic and international participations of PTT Telecom were only modest: its commercial activities in the Caribbean, Central Europe, the Ukraine, Indonesia, and the cross-national Unisource joint venture, included high start-up costs, taking a relatively long

time to recover investments. In its investments over the last five years, PTT Telecom has given priority to upgrading its infrastructure and developing new services: the roll out of cellular communications (GSM), the digitisation of the fixed infrastructure, optical fibres in the local network, and the promotion of a myriad of new broadband and intelligent services. In 1994 PTT Telecom started the DeciBel-operation to introduce and implement a new number plan. Re-organisation of the number plan was required because the public operator had to respond to an increasing demand for additional telephone numbers, to create number space for potential competitors, and to meet EC rules for uniform alarm numbers.

Table 5.1: Key Data PTT Telecom	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94
Turnover (in NLGb)	na	na	na	na	na	na	na	na	8.8	9.5	10.3	11.1	11.8	12.7
Operating Results NLGb)	0.3	0.3	0.7	0.9	1.1	1.1	1.2	1.2	2.4	2.6	2.6	2.8	2.7	2.9
Rate of return	6.1*	6.6*	7.6*	8.6*	9.6*	9.7*	10.3*	9.5*	12.3	12.7	12.2	12.4	12.1	13.5
Workforce (x 1000)	29.6	29.8	29.5	29.7	30.6	31.7	31.8	31.4	31.5	31.8	34.5	34.9	34.4	33.9

* accounting system did not differentiate between postal and telecom services

Source: PTT/KPN Annual Report 1981-94

After the de-nationalisation and liberalisation measures of 1989 were implemented, KPN had to adapt its internal organisation to the changed external environment and - like any other firm - to strive for profit-maximisation and return on investment. KPN staff lost its civil servants status and became subject to one collective labour agreement, that brought wages and working conditions more in line with the private sector. The higher ranks of PTT Telecom's management (about 200) have been moved from collective pay terms to performance-related and personal contracts. As a consequence overall salary levels were reshuffled with wages in the lower ranks decreasing in relative terms and wages in the higher grades increasing (Van Den Besselaar & Visser 1993). A Central Corporate Works Council has been installed, in which employee representatives and company management negotiate about operational and strategic issues. In the new situation the trade unions are only represented at the holding level, they do not have access to the district level, subsidiaries and related companies. The transition from a state bureaucracy to a market-driven enterprise was not without teething problems caused by an inflexibility that still persisted within the new PTT organisation. Initially, the unions complained about the social climate deteriorating and the work load becoming too heavy. PTT Telecom aimed to create sufficient internal flexibility by implementing reorganisation measures like decentralisation and divisionalisation, the upgrading of personnel by job replacement and retraining programmes and the recruitment of highly qualified staff from outside. In 1990 PTT Telecom initiated a total quality management campaign to increase its quality of service to residential and business users by emphasising customer care, client satisfaction and account management

(PTT Telecom 1993). Besides the introduction of itemised billing in 1994, PTT Telecom especially targeted business customers through creating decentralised regional units, and appointing account managers to settle customised contracts with large users (e.g. bulk discounts and tailored services).

Since 1989 PTT Telecom's workforce initially rose from approximately 30,000 to 34,000 in 1992, and then fell to about 32,000 by 1994. This increase of staff brought about by PTT's decision to digitise its network, promote new telematic applications and hire new skills and capabilities (notably sales and marketing expertise). In 1992 PTT Telecom's management announced an efficiency and rationalisation programme, arguing that in the medium term growth could only be realised by consolidation and cost efficiency at home and expansion abroad. The programme outlined the cutting back of 10 per cent of its labour and overhead costs within two years. The shedding of labour (about 1000 employees) would take place through natural wastage and no forced layoffs were announced. Although already one of Europe's most efficient telecommunications companies, PTT Telecom announced a new efficiency drive in 1994 to cut back 10 per cent of its total workforce, involving 3000 to 4000 layoffs in the medium term. Facing the effects of increasing international and domestic competition and far-reaching automation of network switching, the unions were convinced that it was better to participate in the negotiations about shedding labour than to be left out. Although the potential for staff cuts may have been higher, the actual number of redundancies was restricted by the agreements made by management and the unions in 1988, the active involvement of the unions in reshuffling, and the stringent industrial relations legislation in the Netherlands.

After 1989, PTT Telecom separated its activities into five business units based on the following product-market combinations:

- Network Management: responsible for planning, installing, maintaining and operating the telecommunications infrastructure and the basic services, assigned to the company by law;
- International Telecommunications: in charge of handling cross-border services and coordinating the other international activities of PTT Telecom;
- Business Market: telecommunications facilities and services for business users;
- Telematic Systems and Services: focusing on the new markets of value added networks, datatransport services and tele-services: datatransport services (DN-1), videotex (Viditel), electronic mail, EDI-services and others VAN services;
- Residential Market: supplying a range of terminal equipment and services to households and small businesses.

After establishing the global carrier Unisource in 1992 (together with European partners), PTT Telecom has started to transfer and integrate an increasing number of business activities into Unisource. In addition to the reorganisation of its business units, PTT Telecom decided that the lower district levels of the corporation needed restructuring. In order to be close to the market and to cut operational management costs, the functional form of the 13 districts, organised through a general board and

four directorates for technical, commercial, financial and social issues, had to be replaced by a more decentralised grid structure, linking territorially defined basic units with expert-like support units. On behalf of corporation's headquarters, the districts would remain responsible for the construction, operation and maintenance of the networks within particular territorial areas. In every district two or three regional business units for sales and services, would be established, consisting of about 250 employees, responsible for carrying out the whole range of service provision in the business and residential markets. Support units, covering a larger territory of three or more districts, would offer specialised expertise and capabilities to individual district units, like consultancy, engineering, and (project) management support. In 1993 a beginning was made with the implementation of this new organisational structure.

Changes in the External Organisation of PTT Telecom

With the telecommunications market losing more and more of its monopolistic structures, PTT Telecom has transformed itself from a centralised functional single-product organisation into a multidivisional company that is far more responsive to the market than before. It has attempted to diversify into a multi-services provider and build up a customer orientation by directing marketing efforts on profitable markets (dataservices, tele-services and international telecommunications) and establishing price differentiation schemes. In its attempt to meet the demands of both residential and business customers PTT Telecom partially succeeded: while the quality levels of its residential services were rated as more than sufficient, its service provision to business users showed several shortcomings (Consumentenbond 1992; McKinsey 1993). PTT Telecom began to use tariffs as a strategic instrument with the aim of being one of the cheapest operators, both for residential and business telephony services (KPN Annual Report 1993). The provision of the reserved services was still subject to a price-control regime: tariff increases must be below the consumer index. In order to match cost-based pricing with these tariff regulations, PTT Telecom followed a policy of shifting variable to fixed costs and of overall tariff rebalancing. After 1989 tariffs were restructured by increasing the rental (or subscription costs) of the telephone service, raising the charges of local calls (of residential consumers) and cutting the charges of business customers for international communications and datatraffic.

The erosion of its monopoly has prompted PTT to embark upon a diversification strategy into various segments of the electronic information market (see table 5.2). PTT Telecom has moved into the expanding market of business communications by responding to the need of large diversified companies to manage their information flows and provide customised network services with 'one-stop-shopping' facilities. It has for instance taken over the automation and telecommunications operations of some Dutch multinational companies (e.g. the chemicals company DSM and the transport services company Nedloyd). Another stronghold of PTT Telecom is in the market of value added network services, electronic data interchange and dedicated wide-area networks. Here PTT has participations in ventures like Travel-net, Intis, PTT EDISon, PTT EDINova, Schiphol Telematics, Surfnet, Encompass Europe and

Transopen. KPN/PTT Telecom is enlarging its base from the telecommunications sector to the multi-media industries and from the provision of network capacity to advanced and value-added services. Besides having exclusive rights for providing the infrastructure and basic services (through PTT Telecom), KPN had substantial control over the leading cable operator in the country, Casema. With the creation of the subsidiary KPN Kabel at the end of 1994, KPN has become active in cable development and network operations overseas. KPN/PTT Telecom has diversified in audio-visual production (the acquisition of Cinevideo), videoconferencing and satellite news gathering services (Intrax venture), homeshopping (TeleKado); pay-per-view and video on demand (TeleSelect). In the audiotex domain PTT Telecom initiated Call Factory to provide voice-response services and acquired 50 per cent of the shares of Teleworld, an operator of interactive teletext and premium-rate phone services. Furthermore PTT is involved in the development of videotex (through its Viditel-service and its participation in the system integrator VTX) and gained substantial shares in type approval and consultancy (through Telefication and Intercai). Late 1994 KPN announced the establishment of PTT Multimedia, including its various new business ventures, like Planet (providing access to Internet), Telekado, VTX, Teleselect, and Teleworld.

In the market for international business services, PTT Telecom has followed an expansionist strategy by entering new geographical markets and joining forces with foreign business partners. The reasons for establishing cross-national alliances were the limited size of the Dutch home market and the search for increasing economies of scale in its business operations and to achieve a global coverage for its services. In 1989, the newly established corporation PTT Telecom already had minority stakes in the satellite cooperatives Intelsat, Inmarsat and Eutelsat and acquired a small stake in Infonet, the international services provider owned by a group of PTT's. A major international endeavour of PTT Telecom was its active participation, together with middle-sized national operators, to establish Unisource, a venture that is to become a true European long distance operator. Summer 1994, Unisource became an equity partner in the Worldpartners Company, an AT&T-dominated global association of national carriers that delivered international data, voice and messaging services. At the end of 1994, AT&T and Unisource decided to deepen their collaboration in a joint venture in Europe, Uniworld. After less than five years, Unisource (still loss making and revenues of about NLG 1b) employs approximately 1500 employees, organised in the following units: Business Voice Services, Mobile Services, Carrier Services, Card Services, Business Networks and Satellite Services (Unisource Annual Report 1994).

Unisource was established in 1992 as a strategic alliance of PTT Telecom with Televerket/Telia (i.e. the Swedish PTT) with the purpose of providing managed network services to large international business customers. The Unisource venture did not emerge out of the blue, it was an extension of a collaboration between the Dutch and Swedish PTT's that had started earlier with the Vesatel-initiative in 1991. The decision of the two carriers to provide international satellite services together through Vesatel proved to be a test case for the strategic international alliance of Unisource, that was established a year later (incorporating Vesatel). In order to

develop international end-to-end services with one-stop shopping facilities Unisource entered into a commercial agreement in 1992 with Sprint (the third US long distance operator) to increase world-wide coverage. One year later, the Unisource initiative was extended to include the Swiss PTT, and ownership equally divided among the three participants.

The business portfolio of Unisource gradually grew by the incorporation of the constituent partners' activities: electronic mail, EDI, virtual private networks, videoconferencing, mobile services and dataprocessing services. PTT Telecom, like its partners, transferred its business unit Telematic Systems and Services and its chain of international sales offices of PTT Telecom to Unisource. In the near future Unisource will take over all the international licenses activities, mobile operations and business development of its constituents. In 1994 Unisource, together with AT&T, saw its efforts rewarded when it was awarded the tender to provide and manage the international private voice network of 30 leading multinationals (BT's bid was also honoured). Although Unisource established itself effectively as a European long-distance carrier, handling international voice and datatraffic, the company nevertheless had 'teething problems'. When Unisource started to integrate the various business operations of its constituting members and reorganise them to eliminate overlapping activities, coordination problems between the constituent partners arose. For instance 'battles over turf' took place between PTT Telecom and Unisource about the precise delineation of responsibilities in the distribution of business network services. The collaboration with Sprint turned out to be a technical and commercial disappointment. After problems emerged with regards to interconnection of the two networks, due to differences in basic technology used, Unisource decided to terminate the agreement with Sprint. Instead, Unisource linked up with SITA, the airlines telecommunications cooperative, and with KDD, the Japanese international operator, for service provision outside Europe.

In 1994, the Swedish/Dutch/Swiss alliance made deals with Telefonica, the Spanish public operator acquiring 25 per cent of the Unisource shares, and AT&T to provide global services jointly. By linking up with Telefonica, which brought its datacommunications and international services into the joint venture, Unisource extended its business activities into Southern Europe and Latin America. In June 1994, Unisource announced it would join the Worldpartners consortium, in which it would acquire a 20 per cent stake. Originally established by AT&T, KDD from Japan and Singapore Telecom in 1993, the Worldpartners Company was enlarged with several operators from South-East Asia and with Unisource as its European arm. In December 1994 Unisource and AT&T formed a $1b equity partnership, to be named Uniworld. In this new company, 60 per cent of which was owned by Unisource and 40 per cent by AT&T, the two partners would locate their European data, satellite and business voice services. This latest consolidation will turn Unisource into a holding company of its local European partners and restrict its portfolio to the markets of mobile communications and calling card services. Today PTT Telecom works closely together with its Unisource partners and AT&T in the tendering for licenses and participations in Europe and elsewhere. After linking up with AT&T and

its Worldpartners, Unisource may well decide to terminate the collaboration with the airlines cooperative SITA.

Table 5.2: List of the Major Partnerships of PTT Telecom Netherlands	Country of registration	Group interest in allotted capital	Major Business Partners of PTT Telecom
Infonet Nederland	NL	100 %	-
PTT Telecom Caribbean NV	NL Antilles	100 %	-
Unisource Business Networks	NL	100 %	-
Intrax	NL	80 %	NOB (Netherlands Broadcasting Facilities provider)
Isyspol SRO	Slowakia	80 %	Slowakian PTT
Cinevideo Enterprises BV	NL	69.9 %	-
Intis	NL	52.6 %	Harbour of Rotterdam, Cap Volmac (replacing BSO automation)
Intercai	NL	50 %	Getronics
Telecomspol SRO	Czech Republic	50 %	SPT (Tsjechian PTT)
KPN Multimedia	NL	50 %	PTT Post
Unisource NV	NL	33.3 %	Televerket/Telia, Swiss Telecom
Encompass Europe NV	NL	35 %	American Airlines, CSX Corporation
PT Bakrie Electronics	Indonesia	30 %	-
Videotex Nederland	NL	19.5 %	VECAITEX (NL), NMB Postbankgroep (NL), Rabobank Nederland, Getronics (NL), Pensioenfonds KLM (NL)
UMC Ukranian Mobile Communications	Ukraine	16.3 %	DBP Telekom (FRG), Telecom Denmark, Ukranian Government
Pannon GSM	Hungary	16 %	a.o. Telecom Denmark, Telia/Televerket (Swedish Telecom)
Utel Ukrainian Telecom	Ukraine	10 %	DBP Telekom (FRG), AT&T, Ukrainian government
Infonet Services Corporation	USA	5.4 %	DBP Telekom, Belgacom/RTT, Swiss PTT, Televerket/Telia, Transpac/France Telecom, Telefonica (E), KDD (Japan), Singapore Telecom, Telecom Australia, MCI (USA)
Eutelsat	France	3.8 %	various European public operators
Inmarsat	United Kingdom	2.5 %	various national operators
Intelsat	USA	1.2 %	various national operators
* NV Casema (indirectly through the KPN holding)	NL	76.5 %	NOS (Netherlands Broadcasting Organisation)

(Source: KPN Annual Reports 1989-94)

To supplement its activities in the European market for business services, PTT Telecom also entered the newly emerging markets in Central and Eastern Europe, Indonesia and the Caribbean. It established cooperative arrangements with some of the Eastern European telecommunications administrations TelecomsPol (Czech Republic) and Isyspol (Slowakia)(in the areas of consultancy and sales), and with the Bulgarian telephone administration to reroute international traffic. PTT Telecom's strategy to penetrate the Hungarian telecommunications market showed mixed

results: its bid to participate in Matav (the Hungarian PTT), failed, while the Pannon Mobile Services consortium, in which PTT Telecom, Unisource partner Telia/Televerket, and other Scandinavian operators were represented, was awarded to become the country's second mobile operator. PTT Telecom also actively participates in overhauling the Ukrainian telecommunications infrastructure. Together with its partners AT&T, Bundespost Telekom, Telecom Denmark and the Ukrainian government administration, PTT Telecom is involved in the construction, modernisation and operation of a fully fledged national and international network. PTT Telecom has also attempted to acquire stakes in the national operators of newly industrialising countries in South East Asia. This strategy proved relatively successful in Indonesia, when PTT Telecom became actively involved in the modernisation and expansion of the existing telecommunications network in 1993 through a strategic alliance with Telkom, the country's national operator. For that purpose it decided to expand the collaboration with local Indonesian partners by acquiring a 30 per cent stake in PT Bakrie Electronic Company (NLG 90b), a private operator, a year later.

5.8 *Regulatory Reform of Dutch Telecommunications Policy*

The Creation of a New Regulatory Regime

In the post-1989 telecommunications framework, PTT's operational and regulatory tasks were separated through the establishment of a concession-based regime. The government had granted the concession-holder KPN the exclusive right to install and operate the public infrastructure and basic services. At the same time forced KPN was forced by law to offer these reserved services nation-wide and meet certain performance standards. Because of its obligation to provide public services at uniform charges, PTT needed some sort of protection to be able to carry out and finance its exclusively licensed activities and to prevent it from the effects of (potential) competitors by-passing the network and cream-skimming the commercially attractive markets. The HDTP-body of the Ministry of T&PW was given the responsibility to regulate and supervise the concession-holder and the postal and telecommunications industry. With the exception of the reserved services regarding which it was subject to mild tariff regulations, PTT was responsible for setting its own tariffs. For the provision of the reserved basic facilities a price cap system was installed, that was based on the weighted average of tariff changes of the dedicated services. This system of price controls implied that the cumulative tariff increases had to be beneath the Consumer Price Index (CPI) (for telecommunications) and the wage index (for postal affairs). PTT had to submit a preliminary proposal for tariff changes to the Minister, who, after having ensured that the terms of the price cap formula were respected, would enforce the plans. It was believed that price-cap regulation would secure the uniform pricing of the reserved services and protect domestic customers from excessive price increases. Thus far the process of tariff rebalancing has been carried out gradually by PTT Telecom with modest price increases of local calls and line rentals, all within the CPI-0 price cap, and by a continuous series of substantial price cuts in international communications.

In April 1994, PTT Telecom made it clear that tariffing would be more market-based by increasing rentals with approximately 5 per cent, local calls with 20 percent, and inquiry services with 400 per cent, while making substantial cuts in international communications. The reaction of consumers representatives to the tariff rebalancing has been modest and balanced: they accepted the price increases of the basic services and criticised the raise of rental charges (Consumentenbond 1993). The consumer association considered PTT Telecom's decision to raise rental charges unnecessary, because they were already among the highest in Western Europe. Furthermore, raising rental charges would be an easy way for PTT Telecom to secure its standing revenues without seeking real competition.

The 1989 Act required PTT to submit an audited annual report to the Minister on the results and the development of the reserved services (i.e. publishing statistics on quality of service, network capacity, tariffs, financial results etc.). PTT Telecom also had a statutory obligation to provide its major stakeholders with accurate planning indications for the medium term, concerning investments, prices, standards and policies regarding the future provision of the infrastructure and the dedicated facilities. In the value-added services and terminal equipment markets PTT was allowed to compete freely. Originally, present legislation presupposed a clear separation of PTT's Telecom's public and commercial activities through distinct reporting and accounting systems. Such a separation between the monopoly and market activities was seen as the first step to a *de facto* divestiture of PTT Telecom into two subsidiaries, originally proposed for 1994. The decision to separate the public and commercial tasks of PTT Telecom, however, was abandoned in 1992. The then Minister dropped the idea of an organisational divestiture, because this would hamper the economic position of PTT in the relatively open home market and would be counterproductive to its internationalisation strategy.

The liberalisation and (pseudo-)privatisation measures were accompanied by the creation a new framework for advice, consultation and supervision in telecommunications policy. In the new situation the political and administrative jurisdiction for both policy making and rule-setting concerning the post and telecommunications sectors fell under the directorate HDTP of the Ministry of T&PW. Besides keeping responsibility for draft legislation, HDTP acted as a kind of regulator and supervisor for the postal and telecommunications sectors. The establishment of HDTP in 1988 implied that regulation and supervision were separated from the operation of the exclusively licensed functions, which before had all been integrated within the PTT administration. HDTP was entrusted with the administrative task of surveying the reserved functions of KPN and controlling the charges of its reserved business activities. Furthermore it scrutinised KPN from cross-subsidising its reserved and commercial activities and became ultimately responsible for type approval of terminal equipment, frequency allocation, and licensing operators and cable systems. HDTP also acted as PTT's (sole) shareholder on behalf of the government.

The advisory and consultative structure of the Advisory PTT-Council (*PTT-Raad*) was replaced by the Advisory Council for Post and Telecommunications RAPT and the Consultative Body PTT Telecom (*Overlegorgaan PTT*). RAPT was a statutory

advisory committee made up of independent experts, making recommendations to the government on the broad lines of policy, technological developments and Parliamentary proposals in the fields of post and telecommunications. It was also consulted by the Minister in the review of KPN's annual concession report. Compared to the former Advisory PTT-Council, RAPT covered a larger area, but on the other hand it was mainly concerned with advice on broad policy lines. Having been granted a provisional legal status in 1989, RAPT was renamed the Commission for Advice on Postal and Telecommunications Policy CAPT and integrated in 1992 into the departmental Advisory Council of Transport and Public Works. The purpose of the Consultative Body PTT was to act as intermediary between PTT and its stakeholders to discuss policy issues of a general nature and national significance, that had a direct relevance for the exclusively concessioned services assigned to PTT. According to the original plan the Consultative Body had to develop into a platform, composed on a representational basis, for consultations between PTT and its major stakeholders at least twice a year. In the Consultative Body PTT Telecom were represented, apart from PTT, equipment suppliers, service providers, customers (households, small and medium-sized firms, large users and government), employers and employees. In 1992 a new body was established, the Consultative Body on Postal and Telecommunications policy (P)OPT, in which government and the major stakeholders of the telecommunications industry would periodically meet. The reason for the creation of this new departmental body was the absence of a consultative platform where the Ministry of T&PW could discuss operational aspects and policy issues with the public operator KPN/PTT and its stakeholders. Whether the OPT-agency really supplements the established institutional framework (notably the Consultative Body PTT Telecom) without overlapping responsibilities and functions, remains to be seen (see fig.5.2). The interests of foreign operators active in the domestic telecommunications market, like British Telecom, Transpac/France Telecom and Esprit Telecom are notably not (yet) represented in the consultative bodies.

Shortcomings of the Newly Created Institutional Framework

Initially, the institutional framework for advice, consultation and supervision & regulation was created to guarantee a well-balanced relation between PTT's public function and the private interests of its major stakeholders and to increase the strategic flexibility of the Dutch telecommunications sector. The framework institutionalised the official exchange of information concerning such policy issues as price controls, quality of service and long-term developments in infrastructural planning between PTT and the Ministry, Parliament, equipment manufacturers, service providers, customers etc. The present institutional framework of Dutch telecommunications fell short in at least four ways (NVI 1991; CIB-RCO 1992; Slaa 1991, 1993; De Ru 1993a, b; McKinsey 1993; CAPT 1993b, c; NOTA 1993). First, the policy information made public by PTT in its capacity of exclusive licensee was considered insufficient by its major stakeholders. In practice the lack of information provided by the regulated PTT obscured its public accountability and hindered parliamentary oversight of the industry. Secondly, the newly created market was not

yet working perfectly. It lacked the proper conditions such as equal access and fair play. Thirdly, it was thought that the new framework was inadequate for monitoring PTT's activities and promoting new entry, innovation and fair competition. Fourthly, the newly established regime was unable to cope with the demands and requirements of the Internal Market and EC-legislation.

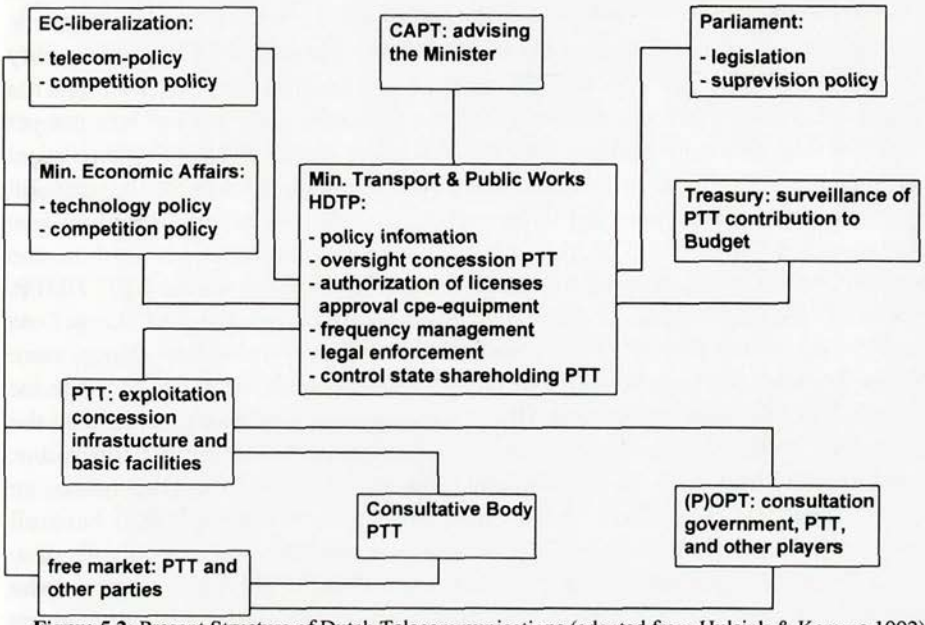

Figure 5.2: Present Structure of Dutch Telecommunications (adapted from Hulsink & Kemme 1992)

The first criticism launched by the business community concerned PTT Telecom's secrecy about the prevalent conflicting loyalties between the commercial and the utility functions and its reluctance to give policy information about its public activities (i.e. the operation of its reserved services and the long-term plans concerning the telecommunications infrastructure). In the newly installed regulatory and supervisory framework PTT was obliged to report on investments and long term planning directly related to its public activities and subjected to an auditing regime. Minister and Parliament were supposed to check these plans on the basis of criteria such as economies of scale, universal service, international competitiveness and innovation capacity. So far PTT has not been able to comply fully with this condition, and has appeared unable or reluctant to present adequate strategic information about its long term strategy with respect to its public functions. RAPT, the Minister and Parliament complained about the vagueness of the first long-term plans of the concession-holder (1989-90) and demanded more detailed and concrete information about future investments to promote technological developments and tariff rebalancing (RAPT 1990; TK 1991/92: 21693). They argued that the plans contained little information and that it was impossible to maintain proper supervision that way. PTT reacted by publishing a revised version of its long term plan for 1990.

Although this second attempt was welcomed, RAPT again criticised the lack of vital information regarding a number of strategic policy aspects (PTT Telecom 1991; RAPT 1990,1991a). Another illustration of the concession-holder, opposing the obligation to provide policy information to its stakeholders, occurred in 1994, when KPN separated its report to Parliament on the operation of its reserved services in a public and a confidential part. To some extent KPN's plea for secrecy (mainly dealing with financial information was respected by the Minister (TK 1993-94 21693/21-22).

The second complaint referred to the fact that the separation of PTT's public utility and commercial activities was obscure and the relationship between PTT and its stakeholders (competitors and customers) in the post-monopoly market was not yet transparent. The dominant position held by PTT in the market place and the political arena impeded the equal access of new entrants to the markets of cable, information services and mobile communications, hampering the effective supervision of PTT as both concession holder and market player. The third criticism referred to the relatively weak position held by the administrative agencies *vis-à-vis* PTT. HDTP, RAPT and the Consultative Body PTT were originally designed to act as countervailing powers to PTT's monopoly. In practice, however, things were different. In terms of expertise and staff HDTP was too poorly equipped to supervise and guide the liberalisation process. HDTP's manoeuvrability was restricted by the structural information asymmetry between the concession holder and its supervisor, and by its close ties with the government. The small size of the Directorate, an ineffective recruitment of staff, and a rather late creation (Spring 1988) have all contributed to the malfunctioning of HDTP both as a watchdog and as a policy unit in charge of stimulating innovation and market competition.[18] The poor quality of the regulatory and supervisory functions was illustrated further by the difficult contacts between PTT as concession holder and its customers in the Consultative Body PTT. This administrative entity was originally established as a platform for regular consultations between PTT Telecom and its customers about the capacity, character, and quality of the infrastructure. After more than three years of being operational, the Consultative Body received severe criticisms for being ineffective and informal, lacking any formal authority and decision making powers. PTT Telecom's stakeholders were critical, both of the information provided by PTT and of the entity's functioning. The negotiations within the Body were open-ended and it did not have any compliance mechanisms that could force PTT to go into detail on its long-term infrastructural planning. PTT Telecom (1991) clearly thought little of the body as a formal consultative platform, having a preference for more informal and bilateral contacts with each of the individual parties involved. PTT effectively managed its business environment by joining relevant trade associations, that up to 1989 were considered opponents (e.g. CIB-RCO), and it attracted high-ranking officials from the public administration (NOTA 1993). So the present institutional framework in Dutch telecommunications has generated an obscure market, with PTT

18 About half of HDTP's executive staff came from PTT while the other half was recruited from other directorates of the Ministry (notably transport), lacking expertise and experience with regulating telecommunication.

acting as a kind of self-regulating conglomerate, dominating the policy process on the basis of its virtual information monopoly, recruitment of policy experts (i.e. a braindrain of civil servants) and the 'divide-and-rule'-tactic of collaborating with third parties.

The reluctance of PTT to give information about its long term strategy, and the relative inability of RAPT, HDTP and the Consultative Body PTT to do something about it, made it clear that supervision over the concessionaire was insufficient. The Consultative Body and the advisory body RAPT, both keeping a low-profile, were not effective as strong countervailing powers to the established parties. Consequently, effective monitoring of the implementation of the administrative separation between the public function of PTT and its commercial activities in the liberalised markets of terminal equipment and advanced services was lacking. This triggered rumours about anti-competitive practices and collusion between the concession and the commercial functions of PTT Telecom (e.g. cross-subsidisation, artificial pricing, dirty tricks, conditional sales). The dominant political and economic position of PTT, reinforcing structural information asymmetry between PTT and its stakeholders, and lack of political-institutional oversight, hindering the monitoring of cross-subsidisation, gave support to those in favour of a formal separation of the concession and the commercial part of PTT Telecom. The large users, public utilities, and cable operators complained about PTT's market dominance and demanded a loosening of the restrictions to allow the resale of capacity to third parties and to further network competition. When they considered enforcing their argument by going to the courts, the responsible Minister responded that consultation and accommodation of the involved parties, PTT, private network operators, service providers and the large users, was a better way to handle this problem: *"In the meantime I want to impress all the parties involved to opt for a practical approach. Consultation and collaboration are more in line with the Dutch tradition than battling out this question by going to Court (NRC Handelsblad 10 04 1991)."*

The fourth shortcoming of the established framework lay in its inflexibility to respond to the increasing jurisdiction of the European Community on domestic policies. The Internal Market Programme of the Commission, together with the ongoing international deregulation of telecommunications, forced Dutch policy makers to update their legislation on a relatively short notice. At the end of the 1980s, when the Dutch had already established their new governance regime, the Commission developed a strategy for the medium term to shape an administrative framework at both the European and the national level by combining clear-cut liberalisation policies with detailed regulations to facilitate equal access and universal service. The effects of EC-legislation were underestimated by the Dutch telecommunications community (V&W 1993). In order to meet the Community regulations, the Dutch government had to liberalise the markets of mobile communications, satellite and datatransport services, and certain national arrangements concerning tariffing, frequency allocation, VAT, resale of capacity and number planning etc. The Dutch governance regime, characterised by a retreat of the state, certain privileges for KPN as the national champion, and self-regulation, could not cope with the detailed regulations set by the European Commission to secure

open network provision (ONP) and fair competition. The fact that emergent issues like interconnection, transparent tariffing, non-discrimination and fair play, needed detailed supervision, dispute settlement mechanisms or even asymmetric regulation to 'protect effective new entry', was not directly understood in the Netherlands. In a letter to the European Commission about the consequences of EC-directives on Open Network Provision ONP, the Dutch Minister complained about detailed political regulations and the high administration costs, going against the general liberalisation trend (V&W 1992). The EC-proposals dealing with the mutual recognition of national licenses in the European market were another argument in favour of a need for structural reform of the 1989-framework. The Dutch regime, based on an exclusive concession for the provision of dedicated services, needs to be replaced by a national licensing system and the mutual recognition of these licenses throughout the European Community. The establishment of an EC-wide licensing regime will offer opportunities for Dutch operators to enter foreign markets (it will of course open up the domestic market to foreign competitors as well). Another area where EC-directives forced the national government to rethink its strategy was that of the established VAT-ruling. The Dutch system, based on the total exemption of the provision of reserved services from tax impositions, was in direct violation of EC-policy. In order to bring Dutch legislation in line with Community provisions, VAT has been imposed on the reserved services from 1996 onwards, raising tariffs for another time.

An Independent Regulatory Agency?

In 1989 the government set up an ad hoc Committee, which it devise long-term plans for the media, information and telecommunications policy in the Netherlands. This Advisory Committee (Arnbak et al. 1990) argued for more interdepartmental coordination and integration. Referring to the Dutch Golden Age of world-wide commerce and shipping trade by the East India Company (VOC), it suggested three alternatives for the reorganisation of the institutional structure in the domain of public electronic communications in the medium term: a pilotage, a free trade and a convoy scenario. The first scenario would rely upon a state-led adjustment strategy, the second would rely upon a market-led approach, and the third accentuated a negotiated adjustment strategy. Aware of market and state failures, the Advisory Committee argued for the convoy-approach, because this would allow for the persistence of a public monopoly on core services and facilities and open up a modest liberalisation path. Another recommendation was the creation of a regulatory agency, to be named the Commission for Public Electronic Communication CEI. This plan was modelled after the experiences in the US and the UK with independent administrative agencies in the communications industry, respectively the FCC and OFTEL, as countervailing powers to the regulated industry and acting at an arm's length from the government. To a certain extent these Anglo-American bodies could be compared to the autonomous administrative agencies in the Netherlands, such as the Central Bank and the Insurance Chamber. The major difference between the American agencies and the Dutch independent governing bodies is their distance to government. The American administrative agencies are based on expertise and

impartiality, while in the Netherlands they are based more on participation, consultation and accommodation. The Dutch governing bodies act as pseudo-corporatist bodies in which the government, together with the various stakeholders, carry the responsibility for policy formation and implementation (Van Boxum et al. 1989).

The power and effectiveness of administrative agencies in general is determined by the availability of adequate information and independent expertise for government, industry and customers alike. In view of the limited capacity and insufficient expertise of HDTP and its incorporation within the government administration, the elements of appropriate expertise and administrative independence have not been sufficiently recognised in the Netherlands (De Ru 1986, 1993a, b). Recently an Anglo-American-style regulatory body has been created in Dutch media policy. In 1988 an independent administrative agency was established, called the Media Commission CvM, that took over some of the regulatory and administrative powers from the Minister in charge of media policy. It was believed that such a regulatory agency would not only de-politicise decision-making on delicate policy issues (e.g. the introduction of commercial television), but would furthermore reduce the Minister's burden by transferring the everyday affairs of rule-making, licensing, allocating air time and monitoring broadcasting, pay-tv and cable television to this Media Commission. According to the Arnbak Committee, the future communications regulator CEI would be responsible for supervising the entire domain of public communications by integrating the regulatory and supervisory functions of the Media Commission (responsible for broadcasting and cable television), and HDTP. The CEI could be supported by an Advisory Commission for Communications CAI. An independent administrative body was also suggested by several stakeholders and experts (CAPT 1993b, c; RCO-CIB 1992, 1993, 1994; NOTA 1994), who all complained about the lack of political and economic transparency in Dutch telecommunications. Clear political leadership was lacking in the restructuring of Dutch telecommunications, due to the incumbent PTT squeezing market competition and government playing the conflicting roles of KPN's shareholder, policy maker and regulator of the industry at the same time. In addition the ONP-directives of the European Community intended to ensure equal access to networks and services, required the establishment of an independent regulator with the authority to settle potential problems with interconnectivity, number planning, fair competition etc.

The government only partially followed the pleas for an FCC/OFTEL-like regulatory body. At the end of 1994 the government announced that a new regulatory unit would be set up next to the policy making and operational units in the HDTP department. This regulatory unit would be a semi-autonomous agency, with a budget of its own (but still operating within the Ministry), dealing with the overall supervision of the telecommunications sector, acting as referee between contending market players and the policing of market behaviour. The Minister explained that the plans to install a more detailed regulatory framework and increase sectoral supervision were a clear breakaway from the past of relying upon a mix of market coordination, self-regulation and non-interference by the government, as laid down in

the 1989 Act (TK 1993/94 23632/3). In order to install an efficient and effective governance regime in a de-monopolised market environment, the suggestion of an independent commission regulating the communications industry presupposes a transparent transsectoral competition policy (Rees 1986). Although it is true that the Ministry of Economic Affairs, responsible for competition and consumer policy has increased its influence on the shaping of telecommunications policy at the expense of the Ministry of T&PW over the years, the instrument of competition policy to control any abuse of the dominant position by the concession holder and to increase the transparency of both the domestic market and the overall institutional framework has been overlooked (Hulsink & Kemme 1992).

Any future telecommunications legislation should effectively cope with these reform measures and the consequences of structural techno-economic developments of an increasing integration of telecommunications, computing and broadcasting on the one hand, and a differentiation of various information and communications functions and patterns on the other. In the long-term this might necessitate an administrative reshuffling between the ministries in charge of telecommunications, media and trade & industry and an adjustment of the existing governance structures in these domains. The advisory body for media policy, Mediaraad (1994) paid attention to the regulatory consequences of the increasing technological and economic convergence between the production and distribution of information and the gradual abolition of the exclusive rights of public broadcasting and telecommunications operators. In its reaction, the Council asked for more radical political measures, paving the way for a new legislative framework for the entire information and communications sector. The present industry-specific institutional arrangements, as laid down in the Media Act, the Radio Broadcasting Distribution Act and the Telecommunications Act, and the transsectoral Competition Act were regarded as outdated and inadequate. Furthermore, the public communications sectors so far were exempt from anti-trust legislation. The Council considered a modernisation of the Competition Act, supported by layer-specific legislation with separate Bills on Information Production and Information Transport, an appropriate means to promote overall efficiency and safeguard against far-reaching concentration (e.g. media cross ownership, abuse of market power) and anti-competitive practices.

5.9 *Summary and Concluding Remarks*

Public policy making in the Netherlands throughout the 1980s has shown an increasing awareness that state intervention in the national economy had been overambitious and that a retreat of the state in favour of market forces was necessary. The Lubbers I Cabinet (1981-1985) introduced the Reconsideration Programme to reduce the high level of public expenditure and restructure the public sector and the welfare state. In this programme deregulation was perceived as one of the remedies to cut back extensive and ineffective legislation by furthering market liberalisation and competition. Other aims of the Reconsideration Programme were the reorganisation of the central bureaucracy and privatisation. Government policy was considered both too centralised and too fragmented, therefore hampering

coordination between the various (sub)departments and coherence in programmes. Privatisation was part of the general strategy to shift the boundary between the public and the private sector by the contracting out of government tasks. The Reconsideration Programme of the Lubbers I Cabinet provided the political opportunity which some sections of the telecommunications policy community were waiting for. The drawn-out affair of PTT striving for more corporate autonomy fitted neatly within the overall framework of the Reconsideration programme.

Before 1989 the Dutch PTT had a *de facto* monopoly on the provision of telecommunications and postal services. PTT was a state enterprise belonging to a government department, its employees were civil servants and its corporate decisions concerning tariffs, revenues, and expenditures needed political approval. PTT's manoeuvrability was constrained by tight government controls: the Minister of T&PW was politically responsible, the financial aspects belonged to the jurisdiction of the Treasury and the area of wages and labour conditions to the Home Office. The formulation of telecommunications policy in the monopolisation period (1881-1981) could be characterised as a clear domination of political-administrative over the corporate interests of the PTT administration. The Treasury used telecommunications revenues as a macro-economic and fiscal policy instrument; the Home Department kept the PTT-administration within the civil service (rejecting to make PTT's employment conditions more flexible); and Parliament refused to give up its right to a detailed supervision of PTT in all socio-economic matters. PTT needed large investments and highly qualified personnel for the expansion and modernisation of its infrastructure. These two conditions, however, could not be met in a state-controlled system. This was a reason to install the high-level advisory Committees Swarttouw and Steenbergen. Finally, during the parliamentary discussions over the recommendations of the two Committees, it became clear that a market-based structure of Dutch telecommunications and a revision of the legal status of the PTT was needed.

The new Dutch telecommunications regime of 1989 was based on the combination of a regulated privatised monopoly, market coordination and industrial self-regulation. Although the government reduced its commitments in the telecommunications domain, ambiguous intervention persisted in the process of opening the core voice and infrastructure markets to competition and establishing an independent regulatory authority. The reasons for this persistent state involvement were the protection of the corporate interests of the PTT and the desire to turn its reorganisation and floatation into a success (e.g. benefiting the government as dominant shareholder) and to keep the key markets under direct political control (e.g. enabling the creation of a viable home-based alternative carrier). After the Dutch government had endorsed the proposal to trim the public monopoly and reorganise PTT in the 1980s, the whole restructuring process focused on preserving the privileged position of a more commercial and flexible PTT, with the government playing a passive role in (re)constructing the new telecommunications market. This was partly due to a lack of knowledge, experience and commitment on the part of both the Cabinet and Parliament, who consequently failed to consider the more radical alternative of making an analytical distinction between PTT's strategy and

official telecommunications policy. But fiscal and protectionist considerations also contributed to the notion of carrying out the reorganisation of PTT, before putting into place a new institutional structure based on a separation between PTT's former operational and regulatory tasks. A concession regime was established whereby the basic telecommunications and postal services were exclusively provided by PTT. The prolongation of exclusive rights in those areas, together with the political decision to keep the mail and telecommunications integrated within a larger holding, would allow PTT/KPN to start from a solid financial and commercially viable base. As a newly established private company, PTT/KPN was no longer constrained by a civil servants statute or obliged to meet political requirements. Its corporatisation and subsequent privatisation allowed for flexibility in payments and working conditions, access to the capital market and herewith facilitated the process of KPN to establish itself as an internationally competitive communications group. The successful corporate transformation has surely benefited the Treasury as single shareholder by the substantial financial gains through dividends and the sale of shares at the Stock Exchange.

Although the fringe market of terminal equipment and value-added services were liberalised, the 1989 framework was still based on the traditional policy paradigm of the *natural public monopoly*, characterised by economies of scale, universal service, unity of control and a privileged position for the state-controlled PTT. A public monopoly persisted through an exclusive concession given to PTT for the operation of the infrastructure and the provision of the dedicated basic communication services. To cope with the distinction between concession-based and commercial services, PTT was forced to keep the accounts on the operation of its dedicated public services and its competitive activities separated. In addition to being the exclusive provider of the public infrastructure and the basic services, PTT has diversified successfully into value added networks, tele-services, cable and satellite television and audio-visual industries and internationalised itself through foreign acquisitions and building strategic alliances through its Unisource and Uniworld/Worldsource partners (notably AT&T). Another objective of the new legislation was to encourage (modest) competition. In 1989 the markets for value added services and terminal equipment became liberalised, herewith meeting the demands from consumers, big business users and the services-oriented industries. The core markets of voice telephony and network provision remained under PTT's exclusive control, however. The notion of a parallel infrastructure, made up of interconnected cable network operators competing with PTT, was as yet not viable. Instead, the idea of bringing the local networks of PTT and cable operators together into one integrated broadband infrastructure to be controlled by PTT in the mid-term, was promoted and the possibilities to implement it were intensively discussed. The 1989 Act did not provide the final and adequate governance structure, however, that the majority of the policy makers had expected. Challenged by ongoing technological developments and the European Commission preparing a fully open telecommunications market by 1998, the Dutch government was forced to alter its definition of reserved basic services shortly after the new legislation was passed. As a consequence, cellular telephony, data transportation services, and satellite communications were taken out of PTT's exclusive concession.

In 1993/94 the government announced that a temporary market duopoly between PTT and a prospective alternative network provider, that included the railway company, power utilities and cable operators, would be installed before a full liberalisation of the Dutch market in 1998. The proposals to liberalise voice telephony and network provision in two stages, and to force the railway company, utilities and cable operators to merge into one competitive domestic carrier, were politically controversial and bound to fail. By following this duopoly path, the Dutch government attempted to impose (temporary) limitations on effective competition with the state-controlled PTT and appoint its contender in advance, without relying upon open market tendering for such a competitive license. This transitional period of restricted competition would enable the alternative operators to pool their networks, operational capabilities, capital, technical expertise, and marketing experience and to catch up with their major contender. PTT, however, protected from immediate competition by strong (foreign) outsiders, would have more time to prepare itself for head-on competition and complete its corporate restructuring. Another factor that could hamper competition in this interventionist duopoly was the ownership structure of the three constituents of this prospective competitive carrier: i.e. controlled by national and local/regional governmental authorities). The plans to install a managed duopoly for voice telephony and network provision and the government-pushed alternative operator were actually abandoned in the Summer of 1995. The ambitions of the three constituents diverged between following a niche strategy to become a local/regional full service provider, to become a long-distance operator, or to compete head-on with PTT Telecom. Furthermore, large business users and (potentially) new operators had effectively demanded that in order to establish workable competition in the core markets of voice telephony and network provision, government intervention should be restricted.

In the 1989 legislative framework PTT's operational tasks were separated from its former regulatory functions and consequently a new institutional structure of separate bodies for consultation, advice and rule-making has been established to look after the interests of the major stakeholders involved in Dutch telecommunications policy (consumers, large business users, the government, equipment industry, competitors). This new structure succeeded the existing neo-corporatist Advisory PTT-Council, that had functioned as an intermediary body for regular consultations between PTT and its stakeholders, and also gave recommendations to government on postal and telecommunications issues. The newly created institutional framework for advice, consultation and supervision could be characterised as a half-way house between the traditional public monopoly and the Anglo-American model of regulation: leaving the first and heading for the second. The creation of an appropriate regulatory structure was subjected to the more important objectives of creating workable competition in the fringe markets (not touching upon the concessioned markets) and preparing the privatisation of KPN/PTT. The consultative and administrative bodies were originally designed for the exchange of information between PTT and its stakeholders, consensus seeking and policy formation. These bodies were poorly equipped in terms of staff, resources and administrative discretion and not up to their task in a post-monopoly telecommunications sector with emergent disputes about

anti-competitive behaviour and the simultaneous need for detailed investigations and arbitration between the parties involved. The combination of administrative functions in HDTP of the Ministry of T&PW, being the sector's watchdog, KPN/PTT's shareholder and policy maker, and the half-hearted implementation of competition policy across the national economy ('the Netherlands as cartel-paradise') further constrained the actual enforcement of the new institutional framework.

The need for an independent regulatory watchdog and more market transparency was strongly felt by the new entrants in the market place, the large and residential user communities, and independent experts (for instance through the consultative body CAPT/RAPT). The European Commission, however, requiring the effective implementation of Community legislation on non-discriminatory access to telecommunications bottleneck facilities and the harmonisation of Dutch competition policy with the Treaty of Rome, gave the final push towards the installation of a (semi-)independent regulatory structure, to be supported by transsectoral competition policy. As a consequence, by 1994, the government separated the role of policy maker and regulator, eventually establishing a semi-autonomous regulatory unit with sufficient means to police the telecommunications industry. So, in the end, the Dutch government was forced to reconsider its modest and distant role in the telecommunications domain vis-à-vis the dominant position of KPN in the market place and the policy arena. In short, the first five years of experiences with liberalisation, privatisation and regulatory reform in the Netherlands show a situation in which an aggressive PTT knows what to do in the new business environment, ambitious new entrants are waiting for their chance, and a reactive government is still coming to grips with the particularities of a post-monopoly setting.

6

The Liberalisation, Privatisation and Regulatory Reform of French Telecommunications: Still In Care of the State ?

6.1 *Introduction*

In the framework of this comparative research on the changes in telecommunications policy between 1982-94, the French government pursued a go-alone strategy to the structural changes in the international political economy, reflecting a high degree of state intervention and developmental objectives. In those years, France successfully caught up with telecommunications leaders by planning innovation through borrowing technology, subsidies and protection of the home market, and the utilisation of public monopolies and domestic diversified business groups to accomplish national goals, such as technological autonomy and economic growth. The French political economy has been characterised by an active central government taking a leading role in industrial development and the formulation of an adequate economic adjustment strategy. Competition policy is not an important element in French of industrial policy; as Darmon (1985: 129) has put it: *'in France everything is initiated by the state'*. To characterise state-dominated societies like France, Japan and Korea, terms like *étatism*, *dirigisme* and administrative guidance have been coined. Hall (1986) mentions four elements that make up the unique position of the French government: the state as a cohesive and centralised unit, relatively insulated from the demands of other social actors and speaking effectively for the public interest and equipped with the capacity to impose its policies on society. France has pursued a state-led growth strategy, in which the central government imposed its will on the market place through central administrative planning, nationalisation, (selective) protectionism and the active promotion of strategic industries. The aim has been to ensure that domestic firms would be successful in catching up with industrial/technological leaders and achieve a position of industrial leadership (Zysman 1975,1983; Katzenstein 1985).

In the 1980s, when most West European countries were already considering and implementing an economic adjustment programme aimed at cutting public expenses and a retreat of the state from the national economy, the French Socialist Government pursued an opposite policy, expanding the powers of the state in the national economy. Between 1981-1986 the Government implemented a mixture of Keynesian, interventionist and mercantilist measures: spurring demand, nationalisation, indicative economic planning, and controlling international trade through the

implementation of various protective measures. The size of the public sector was enlarged between 1981-86 through the nationalisation of the country's key industries (manufacturing, banks, electronics and so on). With respect to the telecommunications industry, the domestic equipment suppliers CGE/Alcatel, CGCT (an ITT-subsidiary) and Thomson were nationalised. In the mid-1980s all the sections of the telecommunications market, R&D, manufacturing and service operation, were effectively brought under state control. While other European countries seriously considered privatising and liberalising their domestic telecommunications industry, France sought to expand and strengthen the position of the national administration, i.e. Direction Generale des Telecommunications DGT (later renamed as France Télécom), by allowing it, in addition to its legitimate role of operating telecommunications services, to take the lead in restructuring and modernising the electronics industry and the information services industry.

As we will see later on, central government and state entrepreneurship have clearly dominated the formation and implementation of telecommunications policy. In 1974, the modernisation of a backward telecommunications system and the reorganising of the overall domestic electronics industry were given top priority in the VIIth Plan. The process of catching up in the information technology domain, by expanding system density, network use and promoting new technologies and services was directed by the French PTT, assisted in its industrial leadership by the national champions in semiconductors, computing and telecommunications, respectively Thomson, Bull and Alcatel. Besides the increasing powers and budgets for the French PTT-DGT (Direction Générale des Télécommunications) to oversee and guide the upgrading of the telecommunications network, this project contained a coherent strategy for restructuring the domestic industry under extended state control and catching up internationally. The interests of the domestic telecommunications industry were promoted through massive state subsidies, tax incentives, large public procurement programmes and export subsidies. Although requiring a relatively high level of public investment, the restructuring process turned out to be a success in the telecommunications domain: the French network is one of the best performing networks in the world, in terms of productivity levels, penetration rates and technological innovation. From the mid-1980s onwards, however, the French government had to accept the increasing constraints of the international political economy, that limited the manoeuvrability of the national government in its home market. Albeit moderately and gradually, the French also had to implement some market-oriented and deregulatory measures.

Given the tight relationships between the PTT administration and its state-owned preferred suppliers CGE/Alcatel and Thomson, the French established a construction equivalent to the AT&T/Bell system before its divestiture. This radical interventionist strategy in the telecommunications and electronics industries in the early 1980s was in total contrast to the radical deregulation policies of the 'innovators' like the UK, USA and Japan. It also differed to a large extent from the polices followed by an 'early adopter' like the Netherlands. The French government showed defensive behaviour, underestimating and to some extent even avoiding the far-reaching impact of the structural changes upon the status quo in domestic

telecommunications. As a consequence of internal and external factors the French state-led approach in telecommunications policy, however, gradually fell into disarray after the mid-1980s. A change in government, the cumulative opening up of the French economy by European integration and the globalisation of the equipment and services markets made it clear that the role of the state and the size of the public sector had to be diminished in favour of free trade and competition (i.e. privatisation and liberalisation).

In section 6.2 the national framework of government-industry relations in France will be analysed: an overview of the French institutional framework will be given on the basis of its production profile, the organisation of interest mediation, the organisation of the state, the economic approach, and the international context. Section 6.3 discusses the development of economic policy between 1981 and 1994. Section 6.4 introduces the established regime in French telecommunications, and gives an historical account of the formative years of the DGT/PTT's public monopoly from 1889 onwards. The process of de-monopolisation, that gradually started in the mid-1980s with the opening up of the terminal equipment and advanced services, will be covered in section 6.5. Section 6.6 continues with a more detailed discussion on the liberalisation of the French telecommunications market. The privatisation of the public operator is discussed in section 6.7, followed by an account of the implementation of regulatory reform of telecommunications in France in 6.8. This chapter closes with an organisational and institutional analysis of the restructuring process in French telecommunications and subsequent concluding remarks.

6.2 *The Wider Political-Economic Setting of French Telecommunications*

Before discussing and assessing the established organisation and structural changes in French telecommunications polity, we will examine the wider political and economic setting of the national economy. This institutional environment will be outlined in a brief discussion of the following national variables, characteristic of government-business relationships in France: the production profile, the organisation of government, the system of interest mediation, approaches to economic policy, and the international dependence of the French economy.

Production Profile

In terms of size France is the fourth largest economy in the world, after the USA, Japan and Germany. Compared with the relatively open economies of the UK and the Netherlands, the French economy is closed. In general, however, the inward and outward openness of the French economy (based on French exports rates and foreign direct investment in France), seems to be in an intermediate position with respect to other leading countries: the level of 'multinationalisation' in France was significantly less than Germany, but more than Japan and the United States (Savary 1984). France has a well-established tradition of keeping foreign investment to a minimum and utilising state enterprises to accomplish national objectives. In 1994 national industries included firms Air France, Elf-Aquitaine (oil), Renault (the car

manufacturer), UAP (insurance), some of major banks (e.g. Crédit Lyonnais), and the utility monopolies. Traditionally French companies have been insulated from both national and international market forces through protectionist measures (i.e. tariffs, quota), government subsidies and cartel-like business arrangements. The French have obtained good results with their state-led strategies in those markets that depend on the central state for R&D support, public procurement and export diplomacy: nuclear power, aircraft manufacturing and aerospace, military electronics, communications technology and transport equipment. In the 1980s, many French companies have left this shelter-strategy and have increasingly become internationally oriented, developing joint ventures and alliances with European, Japanese and American partners. Like the USA and UK, France has a large military-industrial complex, in which the Defence Ministry, the space and telecommunications research centres CNES and CNET, and the leading electronics companies collaborate on military R&D (35 per cent of public expenditure) and the production of defence equipment (Chesnais 1993). France has a strong position in a number of high-technology and capital-intensive industries with leading industrial groups like Cap Gemini (computing services), Matra-Hachette (communications), Thomson (consumer and defence electronics), and Alcatel-Alsthom (telecommunications manufacturing, nuclear power and railway equipment).

Organisation of the State

France has been defined as a 'strong-state' society, in which the central government plays a crucial and all-pervasive role in determining the direction of the major industrial activities *(l'État Providence)*. The various roles of its public bureaucracy in the economic sphere have been described as 'tutor, patron and main risk taker' (Wright 1987). The French political economy exhibits a leading role for the state both as an idea, referring to a 'public service state' and as an institution of political rule shaped through a technocratic and centralised administrative system (Dyson 1980). These notions of strong public powers, with their roots in Roman law, are epitomised by concepts like state interventionism and administrative guidance, or in the French language: *dirigisme* and *étatisme*. The executive branch of government, i.e. the presidency, is entrusted with considerable powers to mobilise private interests to realise national and/or public ambitions, relatively immune from the detailed pressures and interference from Parliament and political negotiation. Every political shift in government (Presidency and/or Cabinet), from left to right and back again, has been accompanied by a reshuffle in the top echelons of the major state enterprises and certain ministries, and setting up/rearranging of administrative entities (e.g. in the highly politicised field of broadcasting. Beneath a changing politicised upper layer and its concomitant spoils system, the central administration has significant discretion with regards to the implementation of public policies. Sometimes, additional powers are provided by the party or coalition in power, but the civil service has a tradition of relying upon elite recruitment and searching for technocratic engineering-like solutions; as nicely put into words by Cohen (1992: 74): 'the engineer outshines the minister, the civil servant prescribes politics'. The country's senior staff of ministerial cabinets and the public administration are

selected and socialised through the *Grandes Écoles* (i.e. the *École Nationale d'Administration* ENA, *École Polytechnique* and *École National Supérieure des Postes et Télécommunications)* and professional membership of the *Grands Corps* with either an administrative or a technical background (e.g. the *Corps des Mines* (energy), *Corps des Ponts et Chaussées* and *Corps des Ingénieurs des Télécommunications).*

The instrument of indicative economic planning has frequently been used in industrial policy making by the French government to stimulate structural weaknesses in its economy and to 'catch up' with the world's market leaders. Rather than delegate responsibility to business and rely on market competition, the Planning Commission (*Commissariat Général au Plan*), in collaboration with the Ministries of Finance and Industry and organised business, drew up a framework that set the social and economic priorities for the mid-term. French economic policies relied upon a system of indicative planning, in which priorities are set for the long-run development of the national economy, particular industries and leading individual enterprises. A typical element in French planning is the definition and implementation of grand projects (*Grands Programmes)*, designed to re-equip the national economic structure, develop new markets and prepare the domestic industry for international competition (Bauer 1992). Additional instruments used by the state to govern industrial activities and (re)organisation are large subsidies, an exclusive public procurement policy, large R&D funds, long-term credit and tax cuts.

The Ministry of Finance has played a very important role in the development of French economic policy by providing credits. It is the primary industrial policy maker, because it controls the allocation of public credit to particular sectors and leading companies. The Ministry of Industry plays the important role of monitoring events in specific industries and to examine their performance and potential to catch up with worldleaders: it seeks to identify the most valuable sectors and economies, the most successful technologies and the most promising target market niches. The Planning Commission CGP played a major role until 1968 during the administration of the Marshall Plan and the modernisation of the country in the 1950s and 1960s. Nothwitstanding its tradition of a strong and efficient state with a powerful executive, French government has another side, that presents a sometimes highly politicised and fragmented picture of decision making. The Ministry of Finance (*Trésor)*, the Planning Commission, other government departments and state controlled companies are at times more engaged in waging turf wars (*'la guerre des administrations & les batailles des compétences'*) than in effectively collaborating in the formation and implementation of long-term economic strategies. Especially the relationship between the omnipresent Treasury and the highly fragmented Ministry of Industry shows the darker side of the efficient and effective French bureaucracy. Bauer & Cohen (1981) and Cohen & Bauer (1985) refer to the substantial powers of large industrial groups (e.g. EDF), that have a collusive relationship with their sponsoring ministerial department and benefit from the bulk of state subsidies.

Compared with France, where constitutional provisions and interventionist traditions have seriously constrained the restructuring of state monopolies and the sale of public

property, Britain has been able to implement a far-reaching privatisation programme with relative ease. The involvement of Parliament and the Courts has been minimal in shaping the new framework for privatisation and regulating the public utilities in a more competitive environment. The government has even retained important (potential) instruments (e.g. golden shares) that enabled it to intervene after the programme was implemented. The situation was slightly different in France, where intensive legislative debates took place about the nationalisation and de-nationalisation programmes of the Socialist government (1981-86) and the Right government (1986-88) respectively (Graham and Prosser 1991). Besides the problems and stalemate caused by the *co-habitation* between a Left-wing president and a Right-wing Prime Minister, the manoeuvrability of the national government to nationalise and de-nationalise was constrained by constitutional requirements and administrative institutions, acting upon the policy process.

In the French Constitution there are some provisions and requirements that have to be met in the case of (de-)nationalisation. The Constitution stipulates that undertakings with a public service or a natural monopoly character should be state property. Unlike the UK, large public utilities (such as telecommunications, energy, airlines) were not privatised in France. The French privatisation programme was restricted to enterprises operating in competitive markets. Another constitutional provision is that the sale of public assets to private parties must meet criteria of equality and guarantee the protection of property rights: the former refers to set minimum levels of the valuation of enterprises being privatised and the latter to the preservation of national independence and the protection of national property. In order to meet legislative and administrative requirements and to prevent the sale of public shares below their true market value, reviews are carried out by the *Conseil Constitutionnel,* the *Conseil d'Etat* and the Privatisation Commission. After receiving their positive verdict, the Minister has the power to dispose of state interests in enterprises. The sale of public property can be arranged through a mutual agreed private sale (sale by *gré à gré*) or by setting up *noyaux durs* of privileged investors willing to participate actively in the future development of the privatised company and to secure continuity of ownership. Important clusters of these 'hard core' shareholders are CGE/Société Générale, Paribas, and Saint-Gobain/Elf Aquitaine.

System of Interest Intermediation

Government-business relations at the top levels of the French economy could be described as an all-dominant state forcing its will upon the private sector, and the existence of strong and often informal relationships between representatives of the public administration and private interests. The government's influence upon management of the nationalised and state-owned firms has traditionally been high: for example the heads of these companies are appointed by the Council of Ministers. The potential powers of the state, however, are paradoxically limited to serve the private interests of the major industrial groups. Bauer and Cohen (1981) have coined the term 'subcontractor state' to refer to the state being dependent upon the expertise, information and compliance from industry, and resulting in the state more or less

underwrites the investments carried out by French businesses. For example, the position of EDF in the domain of electro-nuclear policy could be qualified as that of a state within a state. The personal contacts between business and administration are created and reinforced by way of an intricate elite structure of high ranking government officials and business leaders. The convergence of public and private sector interests is further strenghtened by the practice of *pantouflage*, i.e. the 'institutionalised' rotation of senior managers between state agencies, businesses and financial institutions contributed to a strong loyalty to the French nation. These 'old boy networks', bridging the state bureaucracy and industry, play an important role in the formulation and implementation of public policy in France; they encourage - in addition to the official interorganisational ties- the essential interpersonal communication structures required for an effective policy initiation, adjustment and implementation. In addition to generating personal contacts, these institutions cultivate a kind of 'representing the national interest', that goes well beyond the specific interests of business and administration.

French capitalism has a tradition of small-scale family-owned entrepreneurship, characterised by conservatism and self-sufficiency, and largely preoccupied with the domestic market and protected from foreign inroads by government-imposed duties and prohibitions. Landes (1949) has referred to the relative retardation of French industrial development until World War II. These small and medium-sized firms, however, were rapidly consolidated in the post-war period into large and hierarchically-integrated enterprises that favoured the *mercantilist* combination of domestic protection with selective international competition. The unitary organisational form, characterised by high levels of centralisation, formalisation and functional specialisation, has been identified as the dominant configuration of the larger businesses in France (Lane 1989). However, besides being bureaucratic and hierarchical, the French-style U-form was also paternalistic and authoritarian, with extensive powers for the company's single-tier Board (*Conseil d'Administration*), chaired by the all-powerful *Président Directeur Général* PDG. Given the relatively underdeveloped character of the French Stock Exchange (compared to the USA and the UK), impeding the sale of a company's securities, the larger French firms for their funding had to rely upon self-financing and borrowing from financial institutions. Large institutional investors (pension funds) and the Stock Market have merely served as additional sources of external corporate financing.

The shares of the major companies were often held by large investment banks and/or industrial holding companies. Zysman (1983) characterised the French financial system as state-dominated, credit-based and relying strongly upon administrative pricing. The task of manipulating the economy's flow of funds in order to forge changes in the organisation of French industry fell under the jurisdiction of the central Government. Control over the channels of borrowing and lending, credit allocation and price levels in crucial markets were eventually determined by the Treasury and the Planning Commission. In the French system of indicative planning the government allocated credit to sponsor national priority projects and key industries through a network of state-controlled, state-related and para-public financial-economic institutions. The Planning Commission drew up the details for the reorganisation and rationalisation of

industrial sectors, forging strategic alliances and promoting new high-technology ventures. The Treasury (*Trésor)* decided which financial institutions would have access to the private capital markets to provide French big business with the funds required: semi-public long-term-credit institutions like the *Crédit National* or *Caisse des Dépots et Consignations*, state-controlled investment banks (*Paribas* and *Suez*) and/or deposit banks (*BNP, Crédit Lyonnais, Société Générale*). Recently, however, governmental control over the domestic capital market has been eroded by the globalisation of capital flows, the privatisation of nationalised banks and the concomitant growth of the Paris Stock Exchange.

The framework of industrial relations in France comprises a semi-institutionalised bargaining relationship between a relatively strong employers association and a divided labour movement, and an all-pervasive state (Bunel & Saglio 1984). The large majority of French capital is organised in the *Conseil National du Patronat Français*, in which both the industry/trade associations and the employers associations are represented. Labour in France is organisationally weak with low membership rates, a high inter-union rivalry and a lack of internal union discipline (Lane 1989; Segrestin 1990; Goetschy & Rozenblatt 1992). The French labour movement is fragmented without an encompassing federation to which the various trade unions jointly belong. The density of organised labour fell from about 20 per cent in 1981-82 to less than 10 per cent in the late 1980s (Goetschy & Rozenblatt 1992). The *Conféderation Général du Travail* CGT, with strong links to the Communist party PCF, exhibits a strong anti-capitalist worker culture based on the ideology of an all persistent class struggle. As a consequence CGT has traditionally been inclined to militant industrial action and vigorously opposed collective bargaining. The CGT is relatively well-organised in manufacturing, chemical industry, engineering, public transport and public utilities. Since 1981 the power of CGT has gone down slightly, partly as a result of its militant attitude in industrial disputes and orthodox-communist views, partly because of an increasing rift between the union and its rank and file. The *Force Ouvrière* FO and the *Confédération Française Démocratique du Travail* CFDT are two smaller and politically less radical unions. The FO favours workers participation and collective bargaining, but rejects state-enforced wage restraints. CFDT supports the idea of self-management or self-control by workers. This organisational weakness does not necessarily imply that the unions are without influence.

In some sectors and on some aspects of socio-economic issues the institutional powers of labour are significant. For instance, in the 1980s the unions had a stronghold in the 'older' industries (steel and coal), construction, chemical industry and the state-owned sectors. The unions were also strongly involved in overall work-related electoral consultations and company-level bargaining within both public and private enterprises. Furthermore the (Socialist) Government compensated for labour's organisational weakness by legal intervention in the 1980s. It assured the power and rights of labour unions through fostering social legislation and granted them access to public bodies and management decision making. The state-nourished involvement of unions in industrial relations matters was inspired by the 'public service' role of labour, serving as a vehicle for overall workers' representation and the introduction of collective bargaining at both the plant and industry level (Goetschy & Rozenblatt 1992).

Economic Culture and Ideology

A principal political goal vehemently pursued by the French government in its economic policy over the years has been to safeguard and/or promote the national sovereignty and autonomy of its 'high-technology' and key industries. The development of a French national industrial strategy was inspired by the idea that without active state intervention the French economy would be highly dependent upon foreign capital and technology and would eventually fall behind its major competitors (USA, Germany and Japan). The poor conditions of French industry and management expertise in the post-war period (compared to the superior organisation and management of the US firms) meant that the leading position of France in the world could not be kept up by French business, and therefore was the exclusive task of the state. The French political economy has often been characterised as *dirigiste*, in that the state seeks to control, guide and promote the economic position of France in the world economy. This 'dirigiste' notion indicates that the state controls the structural developments of the national economy and initiates the restructuring of domestic industries or the promotion of emerging industries in order to prepare them for global competition.

Concerning its key sectors, the infrastructural monopolies, there is a strong commitment to safeguarding the provision of public services. As became clear in the dispute caused by the government's announcement to corporatise and privatise France Télécom, this notion of the state looking after the basic interests of its citizens and organising the provision of basic services, i.e. *l'État Providence*, is supported by senior management and the workforce of state monopolies, and the public at large (Mescheriakoff 1991). These requirements to ensure the geographical availability of a package of basic services, that are imposed on the exclusively concessioned public operator, include rather general and symbolic notions about the right of being served and the equal treatment of users, as well as rules to ensure the permanence and continuity of services (cf. the UK, where public and universal provisions are often more detailed, for instance including affordability and minimum quality levels; e.g. Garnham & Mansell 1991). In practice, of course, the public service concept also incorporates the particular interests of private stakeholders, such as protection from competition, preservation of civil servant's privileges, and jobs for life etc.

French industrial policies has generally been aimed at restructuring declining sectors, restricting imports and moving over to more promising industries and technologies. Two central elements in French industrial policy are *créneau* and *filière*. The first element refers to a specific market niche dominated by one domestic industrial conglomerate, the second to the effective establishment of domestic control over techno-industrial complexes and successive production stages within one particular sector. French industrial policy has been oriented towards the creation of national champions in distinctive sectors by actively encouraging mergers and take-overs that would provide the required economies of scale. The reorganisation of particular sectors and companies was facilitated by a massive infusion of capital for investments and the promotion of new technologies. An alliance of the government and the state-controlled financial sector engineered the amalgamation of a particular industry through tax

incentives, credit allocation and a swap of stocks. After more than a decade of restructuring, Thomson-Houston emerged as the French electronics champion, incorporating CII (Compagnie Internationale de l'Informatique), Hotchkiss-Brandt, and CSF. France steadily broadened its initially narrow range of industries and, for instance, initiated its own nuclear energy programme to gain energy independence and explicitly stimulated micro-electronics and telecommunications as a key to the future information society. The national government sought to catch up with its international competitors be pursuing international expansion while at the same time protecting its national economy and culture.

Shonfield (1965: 87) has referred to the French approach to economic organisation and industrial policy as *'Ersatz capitalism or synthetic capitalism'*. Starting from an inherent mistrust of market economies, the dominant belief is that it is better to develop and produce these high-technology products synthetically, like in a laboratory (i.e. insulated from competition). Also the marketing and the commercial development rely on a '(re)constructed' version of the economy, in which market signals are suppressed or poorly understood. The projection of market demand is deduced from the theoretical conditions of a competitive market and modelled predictions about the diffusion of these products, rather than seeing them developed by unpredictable market forces, and the opportunities and hazards generated by real competition.

Another element in the French industrial strategy are the *Grands Programmes*, in which the central government gives clear priority to the development of a particular technology or an industrial sector in an effort to accomplish particular goals. These ambitious programmes are built upon a policy package, in which the idea of national independence (*francisation* of technology), the involvement of public research institutes, the concentration of industrial production in national champions, public procurement of equipment and state-supported exports are integrated (Groenewegen & Beije 1989). Examples of these *Nouvelles Cathédrales* are the Concorde project, Airbus, TGV, nuclear energy, and aerospace (Airbus, ESA/Ariane). In its industrial mission, the state played a leading role as both entrepreneur, protector and facilitator in ensuring technological autonomy and promoting foreign exports for French industry. The government actively encourages the development of French-controlled and advanced knowledge and manufacturing bases in these important sectors through reorganisation programmes, financial assistance schemes, the erection of trade barriers and the creation of export markets in developing nations (*la diplomatie industrielle* in french-speaking countries, former colonies, Third-world countries and the Communist bloc).

An illustration of such a strategy can be found in the colour television industry, in which the French government employed its national SECAM-standard as a non-tariff barrier, in stead of accepting foreign-set standards or attracting foreign investments. While the large majority of European states had already opted for the German PAL-system in the late 1960s, the French government continued to protect and promote its SECAM colour television standard and the domestic electronics sector from foreign-produced TV sets (Crane 1979). French industrial policies have been relatively successful in the key industries controlled by the state through large public procurement

programmes. In less monopsonistic markets, characterised by competition and mass consumption, the French strategy to design and rely upon an independent domestic manufacturing base has been rather disappointing. For example, the *Plan Calcul* in the 1960s to develop a French base in computing rivalling IBM and the *Plan des Composants* to build an internationally competitive semiconductors industry in France in the 1970s, resulted up in clear failures (Cohen 1992; Adams 1989). From the early 1980s, with ever-increasing free capital movements and integrating capital markets, the viability of French state-directed capitalism has been questioned (cf. Adams & Stoffaes 1986). This subject matter re-emerged on the political and public agendas in the early 1990s when socio-economic stability was lost due to long-lasting industrial disputes, mismanagement, abuse of power, and corruption (e.g. Renault, Alcatel, Credit Lyonnais, and Air France).

Positioning in the International Political-Economic System

With regards to its international relations, France's strategy has been based on preserving national sovereignty with respect to foreign/security policy and strategic industries and intergovernmental cooperation in Western Europe through the EC. Traditionally, French governments have strongly rejected the notion of supranationality in the domains of foreign, security and economic policies and instead supported the objective of national sovereignty and techno-industrial autonomy (Dreyfus *et al* 1993). For instance, from De Gaulle's rule until the Mitterand mid-1990s, France successfully developed an independent nuclear striking force (*force de frappe)* and had created a strong military equipment and aerospace industry. Under socialist rule in the 1980s, France sought to establish a *'force de frappe industrielle'* a striking force in high-technology industries and future-oriented manufacturing.

France was also relatively slow to recognise the supremacy of European law over national legislation. The French government supported an intergovernmental approach, often based on informal Franco-German agreements, to speed up the process of European integration. The increasing internationalisation of the world economy and the coming into force of the Common Market from the 1960s onwards implied that France, a leading member of the European Economic Community, had to reform its tradition of 'industrial patriotism', exemplified by mercantilist and protectionist trade policies, in which the state functioned as intermediary between national industries and the world market (Hayward 1986). The international deregulation of financial transactions and the obligation to reduce the budgetary deficit to meet the requirements for economic and monetary union, strongly restricted the possibilities for the French government to intervene in the domestic economy and sponsor ailing industries (Bull, Air France, Renault) and to use credits and subsidies for large-scale investments. The strongest pressures for economic change in France appears to have been generated by external factors, such as the Commission (scrutinising state aids), the impact of free flowing capital, and the requirements of multinational firms for global standards and service provision. The domestic financial markets became gradually deregulated and the interests of the French Stock Exchange were furthered by large privatisation

programmes in the periods between 1986-88 and after-1993. To finance their expansion, French businesses could rely more easily rely on issuing shares through the capital market and reducing loans from their home banks. Furthermore, the French government could no longer automatically use import restrictions or impose trade barriers designed to help the balance of payments or support its strategic industries through large public contracts and state aid schemes.

In the early 1980s, the French government acknowledged that innovation policies implemented at the national level were no longer feasible in the world technology race, as they were too expensive and complex. It therefore attempted to extend the tradition of nationally-oriented research and industrial policies to the European level. In order to reduce the risk of duplicating efforts and to give future *grands projets* the required economies of scale and scope, France proposed to other EC-member states to coordinate scientific and industrial efforts in electronics and the related industries. As a consequence a 'Europeanisation of national innovation policies' was needed (Humphreys 1990a: 208). Challenged by the American SDI-initiative (i.e. Star Wars), the French President Mitterand launched the Eureka programme in 1984, suggesting that European states should collaborate in the research and development in the domain of high technology. The French proposal for European collaboration was an explicit acknowledgement that the European level was more appropriate for the elaboration of large technological projects than the nation state.

6.3 *The Politics of Economic Adjustment in France (1980-1994)*

Immediately after World War II, when the French economy found itself short of capital and materials and its economic infrastructure was destroyed, the state bureaucracy exerted its leadership to rebuild the country. The *Conseil National de Résistance*, led by General De Gaulle, launched an ambitious programme to nationalise the country's key industries (railways, electricity and gas), the big banks and insurance companies (like *Banque National de Paris, Crédit Lyonnais and Société Générale*) and those firms that had actively collaborated with the German oppressor (e.g. Renault). This anti-capitalist programme was accepted with hardly a voice of dissent. After this first wave of nationalisation, two others followed: in the 1960s, under the De Gaulle presidency and in the early 1980s under the Mitterand Presidency. In the 1960s new state enterprises, like *Elf-Aquitaine* (oil), *Société Nationale Industrielle Aérospatiale* (aerospace) and *Compagnie Internationale pour l'Informatique* (information technology) were created with the purpose of rationalising industries and they were to be used as instruments in ambitious technological projects. In the 1980s, the Socialist-Communist Mitterand-Mauroy Government completed the two previous nationalisation projects by bringing the remainder of the industries and companies of strategic importance, like banks, the telecommunications equipment industry, under direct state tutelage.

In the post-war period the French economy was still dominated by a large agricultural sector and a stagnant industry, sheltered from foreign competition and fragmented among many small and medium-sized producers, most of them family-owned firms. At that time French industry was handicapped by a shortage of capital

and materials and a risk-aversive and inward-looking business culture. Organised business at that time was weak and relatively ill-equipped to reconstruct and restructure the country. The task of modernisation and industrial leadership was accomplished by high-ranking government officials, like M. Monnet and M. Schuman who first reformed the post-war bureaucracy and the national economy and embarked upon a system of indicative economic planning and interventionist industrial policies. Government officials successfully expanded and modernised the post-war economy by guiding business and labour in their collective national search for economic growth. In thirty years of constant economic growth with annual growth rates of more than 5 per cent (*les Trentes Glorieuses 1945-75)*, the French economy transformed itself from a traditional capitalist type, to an industrial nation with competitive firms that were dependent on foreign sales and able to compete with imports in their home markets. In 1958 the Fifth Republic was established in which the political-institutional framework of the Fourth Republic was reformed by extending the powers of the President, reorganising the state bureaucracy and trimming the powers of Parliament.

Industrial activities were guided through five-year plans to accomplish certain economic objectives. In the first two plans between 1946-56) the emphasis was on the reconstruction and modernisation of the French economy. The purview of the third and fourth plan between 1957-65 was extended to the whole economy, including the preparation of French industries for international competition by the rationalisation and concentration of industries and the reform of social security and education. In the fifth plan, from 1967 onwards, the French government initiated a new industrial policy based on nurturing national champions in the key industries, and launching large state-funded programmes in the advanced sectors. After the first oil shock and the consequent crisis, the French government was reaffirmed in its opinion that in order to adapt the domestic economy to the new international economic conditions, more public control over certain key technologies was needed. In the telecommunications domain this view led to the (gradual) nationalisation of the foreign subsidiaries of ITT and Ericsson by Thomson; in the computing industry this led to the merger of CII with Honeywell Bull. As a consequence of the liberalisation of world trade and the coming into being of the European Internal Market from the mid 1960s onwards the overall importance of indicative planning decreased. When the French economy was confronted with the technology gap and the successful entry of leading American firms in the 1960s (e.g. Servan-Schreiber 1967), the VIth Plan for instance gave priority of investment over consumption and drew attention to the need to strengthen international competitiveness of French domestic industry and promote external trade. The VIIth Plan (1975-1980) proposed a less encompassing programme in which 25 high priority projects were identified.

With the socialists and communists coming into power after the presidential victory of Mitterand in May 1981 and the ensuing parliamentary elections, a radical strategy was adopted by the Socialist-Communist Government, aimed at expanding the public sector and extending state participation in the national economy (MRI 1982). French public policy changed drastically with the implementation of a policy mix, consisting of an ambitious nationalisation programme, the resurrection of

planification, an interventionist strategy to rescue France's industrial base, an expansion of the public administration, and redistributive measures (a legal minimum wage, an increase of social benefits and progressive tax reform). Also a more active industrial relations policy was carried out, aimed at supporting the position of labour through workers' and union rights in both the public and private sector. While the majority of the Western countries was considering or already implementing supply-side economic remedies to the economic recession of the early 1980s, such as deregulation, privatisation and cuts in public spending, the French leftist government followed a 'go-it-alone' strategy, targeted at strengthening public consumption and the public sector. The following industrial holdings, private firms and banks were fully nationalised: Thomson Brandt (electronics), Rhône-Poulenc (chemicals), CGE (manufacturing), Pechiney-Ugine-Kuhlman PUK (aluminium), Saint-Gobain (glassworks), Paribas (banking) and Suez (banking). Besides 100 per cent state ownership the socialist government also took majority shares in Matra (defence), Dassault (aerospace), Usinor Sacilor (steel), CII-Honeywell Bull (computing) and CGCT/LCT (ITT-subsidiaries). In February 1992, the state holdings accounted for 24 % of the employees, 32 % of the sales, 30 per cent of the exports and 60 per cent of the annual investment in industry and energy in France (P. Hall 1986).

Within a two year time span, however, the leftist Mitterand-Mauroy Government had to reverse its policies because they had been based on erroneous presuppositions. The Socialist policies anticipated a prompt upswing of the world economy and regarded the French economy as relatively autonomous from international economic developments. The radical leftist policies lacked all feasibility and turned out to be counterproductive: the nationalisation and tax proposals gave way to a flight of capital, booming inflation, increasing production costs, a run on the franc, and a record trade balance deficit. The consequent loss of competitiveness and a serious deterioration in the balance of payments made the French government realise that it had to bring its economic policies more in line with international market conditions. Furthermore the state had to rely upon the active involvement of business in the creation of economic growth: President Mitterand publicly stated that *c'est l'enterprise qui creé la richesse*. In 1982-83, the government made a spectacular U-turn with three successive devaluations of the French franc, a freeze wages and prices, cuts in public expenditure, and a tightening of exchange controls. These austerity plans (*la politiqu de rigeur*), together with the emphasis on financial accountability in the state-owned industries, paved the way for a successful comeback of the French economy. After the Communists had left the government in 1983, the Socialists even pioneered with some modest form of privatisation: some nationalised firms were allowed to sell off subsidiaries either directly or through a public floatation and non-voting shares were issued on the Paris Stock Exchange to enable public enterprises to raise funds through the capital market. Furthermore, the nationalised firms in the key industries were allowed to invest abroad and to form strategic alliances with foreign leading producers.

After the right-wing victory in the 1986 parliamentary elections, a Socialist presidency *co-habitated* with a liberal-conservative government. The Chirac-Government (1986-88) gave clear priority to the promotion of the private sector and

competition (*reculer l'état*) through a privatisation plan, deregulation measures (labour markets), cuts in public spending, and the liberalisation of prices and interest rates. An ambitious privatisation programme would furthermore increase the value of the Paris Stock Exchange and enlarge the number of small shareholders. The Chirac government between 1986-88 followed a high-risk strategy: the sale of state assets was on a larger scale than the British, its time frame was much shorter and the Stock Market four times smaller (Dumez & Jeunemaitre 1994). On the list of denationalisations there were companies nationalised by the Socialists in 1981 but also some that had been nationalised just after the war by De Gaulle. Two categories of firms were excluded from the denationalisation programme, because they lacked political feasibility and/or economic viability: the public utility monopolies (SNCF, DGT/France Télécom) and those firms with poor economic performance (i.e. Bull). The minimum selling price of each state enterprise was to be fixed by the independent Privatisation Commission (on the basis of valuation and performance audits and according to generally accepted principles). Later, the task of fixing the floor transfer price was extended, when the Privatisation Commission became involved in the decision making on the composition of controlling interests in the companies in question.

The original privatisation list contained twenty-eight state-owned enterprises: with the relatively short time span of two years allowed to accomplish such a far-reaching political decision only less than half of the shortlisted companies could actually be privatised. The industrial conglomerates CGE, Matra, Saint-Gobain, the banking institutions Société Générale, Paribas and Indosuez, and Havas (advertising) were sold off completely. To prevent a hostile take-over, the government imposed restrictions upon ownership. Foreign ownership of the privatised companies was restricted to 20 per cent and a substantial part of the stock of these state-owned companies would be sold to a selected 'hard core' group of domestic institutional investors and businesses (*noyaux durs)*. These oligarchic shareholders would commit themselves to providing the privatised firms with stability of control and relative autonomy for strategy formation. Also the French broadcasting sector was partially privatised in the mid-1980s through the granting of a special license for pay-TV to Canal Plus (jointly owned by Havas and Compagnie Générale des Eaux) and the sale of the first national TV channel (TF1) to a consortium, led by Bouygues (the construction company). After the collapse of the Stock Market in October 1987, and the troublesome floatation of the Suez Bank (November 1987) and Matra (January 1988), further privatisations were postponed, until after the 1988 elections.

In 1988, when the *cohabitation* ended and the Socialists returned to power, the government declared that there would be 'no more nationalisations, nor more privatisations' (the *ni-ni* policy). Bauer (1988) has qualified the privatisation operation in France 1986-88 as *'capitalism without a financial market and without sanctions'*, in which non-market elements, like mercantilist objectives and political appointments of senior management, prevailed over economic incentives and sanctions by the market. Large-scale privatisation between 1986-1988 and 1993 does not have the close-knit complex of interlocking personal networks, cross-shareholdings, controlling blocks and political allies. Induced by a fear of hostile

take-overs and the perceived small size of French groups compared to German and American companies, the floatation process was administered. The de-nationalisation process was constrained by strong restrictions on foreign ownership and the 'friendly' controls, executed by an interlocking network of reliable domestic holding companies in the privatised business groups. The French government regularly ran into trouble with the European Commission about accusations regarding state aid to the three ailing state-owned companies, Bull, Thomson and Air France.

In 1993, the liberal-conservative Balladur government, succeeding the socialist Cresson government, announced an ambitious privatisation programme, that was expected to raise more than FFr 350b. While the goal of the 1986-88 privatisations was to reduce the national debt, the post-1993 privatisation should help to balance the budget (i.e. prepare for European economic and monetary integration) and finance the government's employment programme (Dumez & Jeunemaitre 1994). The government re-launched the 1986 privatisation programme and intended to sell off the remainder of more than 20 shortlisted state-owned enterprises, whose state equity would be sold on the stock market or to private investors. The final privatisation list included the following state-owned enterprises: Air France, Renault, Elf-Aquitaine (oil), Rhône-Poulenc (chemicals), UAP (insurance), Crédit Lyonnais, and Banque Nationale de Paris. It is believed that these revenues will not only help to balance the budget, but boost the Paris Stock Exchange and thus stimulate the competitiveness of French business in general. As a consequence of the general political and economic uncertainty caused by the co-habitation and the forthcoming presidential elections of 1995, only a few of them were actually sold: Seita (tobacco manufacturer), Rhône-Poulenc, Elf-Aquitaine, BNP, Agence Havas, Saint-Gobain, and UAP. Originally the ailing companies Thomson and Bull featured on the privatisation list, but the sale of state assets was postponed until after the 1995 presidential elections. Just like in 1986, the public monopolies (France Télécom, railways, energy, etc.) were excluded from the whole operation: the combined shift in ownership (from public to private), from a state monopoly to a more open market environment, was not feasible. The support for changes in these 'natural' monopoly sectors was not great: the ideological resistance to 'Anglo-Saxon' free trade and an open European market place was widespread, the performance and quality levels of the utility industries were above average, the large majority of staff was satisfied with being civil servants (Dumez & Jeunemaitre 1994).

6.4 *Monopolisation of Telecommunications in France (1878-1981)*

The Established Telecommunications Regime

In France, telecommunications was a statutory monopoly of the *Ministère des Postes, des Télécommunications et de la Télédiffusion*; in other words the exclusive responsibility of a state administration, the Direction Générale des Télécommunications DGT, later renamed in *France Télécom*. Besides a Telecommunications Directorate, the Ministry included a Postal Services Directorate DGP. Before the 1990 reforms the annual telecommunications budget was part of the overall state budget as an annexed budget and therefore had to be approved by the

National Assembly. Traditionally the budgets of the French PTT depended on year-by-year choices made by Government and Parliament in their macro-economic and fiscal policies. The workforce of DGT/France Télécom belonged to the civil service, which implied occupational safety, and uniformity of rules. France Télécom has never produced telecommunications equipment; instead, switches, exchanges, hand sets and other peripheral equipment are purchased from private industry, using general procedures for state procurement. The PTT was partly a public administration and a public company, including two vertical directorates, Telecommunications with a workforce of more than 150,000 employees and La Poste (including the Money services) with more than 350,000. The PTT included furthermore three horizontal directorates, notably Budget and Accounting, Personnel & Estate/transport. The DGT strategy was to use a vast expansion of the telephone system as a procurement base on which to rebuild the French information technology industry and open up new types of consumer markets for innovation-oriented firms. France Télécom is also involved in broadcasting and cable transmission through one of its subsidiaries, called *Télédiffusion de France*.

The bulk of R&D in French telecommunications is carried out through the CNET *Centre National d'Etudes des Télécommunications*. Officially, CNET, modelled after the famous Bell Labs of AT&T, was merely the PTT/DGT's autonomous R&D centre, but gradually it expanded its powers to include public procurement decisions and technology/industrial policy formation. CNET was required to forge a consensual outlook and close collaboration between the various key players in French telecommunications network systems and standards (Sally 1993). Through conducting and/or contracting out fundamental research to public and private partners, CNET was able to modernise the domestic telecommunications industry by nourishing new technologies (like the E-10, one of the first digital switches; ATM, allowing high-performance switching and promoting the interest of the French telecommunications equipment industry (i.e. CIT-Alcatel). Another relevant institution in French telecommunications was the Caisse Nationale des Télécommunications, established in 1974, to enable DGT external borrowing. Other institutions involved in the financing of France Télécom's operations were the Sociétés de Financement (e.g. Francetel, Finextel, Codetel).

The workforce of the DGT was divided between senior managers organised in *Corps des Ingénieurs des Télécommunications* and lower-raking civil servants, including civil engineers and operating staff. The first category, including the company's administrative-technocratic elite of the company (*le corps)*, was represented through the *Association des Ingénieurs des Télécommunications* (AIT). Especially during the large-scale modernisation of the French network in the 1970s, the reputation of the *corps* engineers grew significantly, ranking behind the traditional corps of *Mines* (energy and nuclear power) and *Ponts et Chaussées* (transport and public works)(Vedel 1984). The second group was organised in the Force Ouvrière and the CGT. Although precise data about union membership of France Télécom are not available, there are some indications about the presence and the power of the unions in corporate and public policy making and their individual strength at the professional elections are available. Of course, the right to vote on an

important management issue is slightly different from joining a union, the large majority of personnel voted and backed the various objectives, set by the individual unions (Lyon-Caen 1993). Between 1970 and 1990 the distribution of votes swung between 35-40 per cent for the Communist CGT, and 17-27 per cent for both the reformist CFDT and the socialist FO (Lyon-Caen 1993; Rugès 1970; Barreau). Telecommunications users were organised in the Association des Utilisateurs du Téléphone et des Télécommunications AFUTT, representing both residential and business customers. The interests of large business users in information-intensive industries were organised in the *Club Informatique des Grandes Enterprises Francais* (CIGREF). This small but effective interest group was the intermediary between individual multi-site companies on the one hand and France Télécom and the central government on the other, promoting large user's demands for a special treatment and policy privileges (e.g. definition of closed group).

Traditionally, the manufacturing market in France has been dominated by subsidiaries of foreign firms: LMT and CGCT/Thomson-Houston of the US-based ITT company and SFTE of the Swedish-based Ericsson company. The domestic industry included the CIT-subsidiary of CGE and AOIP as only small suppliers to the DGT. Together these host and home companies were organised in cartel-like agreements, like Sotelec for transmission (set up in 1947) and Socotel for switching (set up in 1958), through which they pooled patents and agreed on market distribution and quota arrangements. From the 1960s onwards, however, the French government directly and indirectly through its agents CNET and DGT, embarked on a concentration and rationalisation path, that was meant to bring the supply of electronic equipment in domestic hands. The reasons for this creeping nationalisation of telecommunications and electronics were to be found in the ill-equipped organisational structures and business practices of these industries and the targeting of the promotion and development of information technologies in national industrial strategies (Zysman 1977). In 1969 an electronic *Yalta* had been agreed between the electronic giants Thomson and CGE to divide their activities into spheres of influence, respectively electronics (components, consumer and defence electronics) and telecommunications (Bauer & Cohen 1981). A next step was Thomson's take-over of the French subsidiary of ITT, LMT and Ericsson's SFTE in 1976-77; CGCT, ITT's second subsidiary, was not affected. In 1982, the French state acquired the two telecommunications equipment subsidiaries of ITT, CGCT and LCT. In 1985 a second *Yalta* was agreed upon. It was decided that the Thomson Telecommunications Division would merge with CIT-Alcatel; in return, CGE-Alcatel would restore Thomson's troubled balance sheet. After its withdrawal from telecommunications Thomson retained its core activities in defence electronics (Thomson-CSF) and consumer electronics (Thomson-TCE).

Monopolisation of Telecommunications in France (1878-1986)

The telephone service was first introduced in France at the World Exposition of 1878 in Paris. In the early stages of its diffusion the private sector played an active role by providing the investments and taking the commercial risks. The government was at

that time more concerned with merging the Telegraph authority with the Postal system, leaving the initiative to the private sector and granting private companies 4-year concessions to develop and operate telephone networks. In 1879, licenses were issued to Edison, Gower and Blake-Bell in the cities of Paris, Lyon, Marseille and Bordeaux. Before actually constructing their telephone networks the three companies decided to merge into the SGT *Société Générale de Téléphone* (SGT) to benefit from scale advantages and to avoid wasteful duplication. The concession contained a division of labour between the SGT and the central administration: the first was responsible for connecting subscribers to the nearest telephone exchange and the second for linking the various switches and networks and generally overseeing network development. However, the short time frame of the franchise made it extremely difficult for the private SGT company to make adequate investments, recover costs, and reach for high rates of network growth.

At that time government policy was still far from clear-cut: on the one hand the government renewed the existing private licenses in 1884 while at the same time building its own networks wherever the SGT licenses were not applicable. The SGT company was lobbying for a longer franchise period of 25 years, that would allow for a reasonable return on network investments. From 1882 onwards, however, the Postal and Telegraph Ministry started to build its own local and trunk networks in certain towns and urban districts. As a consequence of this, the SGT postponed investments in network expansion, rates were raised and the quality of the telephone service started to decrease. In 1886, the alternative of granting the private company SGT a 35-year license to develop a proper national network was seriously considered. After the expiration of the license the telephone system would be transferred automatically to the state. The political support for nationalisation of the telephone network, however, grew gradually: the Telegraph authority felt threatened by the private SGT; business users were dissatisfied about the service provided; and local authorities and left-wing politicians promoted state control over nation-wide economic activities. In 1889, at the end of the second concession period, the French State acquired the privately owned General Telephone Company and brought it under the jurisdiction of its enlarged Postal, Telegraph and Telephone Administration. After the nationalisation of network operations, SGT became a supplier of telephone equipment and changed its name into the *Société Industrielle du Téléphone* SIT. The home-based equipment manufacturer SIT, favoured and nurtured by the PTT engineers, was acquired by the electronics producer CGE in 1932. As CGE's telecommunications subsidiary it became known as CIT-Alcatel, a forerunner of today's industrial conglomerate Alcatel-Alsthom.

The development of the telephone system in France was slow and highly decentralised, suffering from lagging investment levels and poor interdepartmental coordination. The commercial diffusion of telephony received only little support from the government: policy priority was given to the expansion of the postal services and the railway system (Pinaud 1985). In the first stage of development (1889-1914), the French PTT was seriously hampered by the absence of proper funding instruments and the rigid financial requirements set by the central government to build new local and trunk networks and establish a single integrated

national telecommunications system (Nouvion 1982). Also, the private sector showed little interest in the PTT Department's need for capital. As a consequence, the Department had to rely on current revenues (i.e. selffinancing) to finance network expansion and find new ways of raising money, for example through the notorious system of *avances rembourasables*. The central government regarded the financing of network expansion as a decentralised affair, relying upon contributions from local authorities and an advance payment system of financing investments through subscriber charges. This system of refundable advances assumed the shifting of the financial burden of extending the local and the long-distance networks to the local/regional authorities: if they wished to have the telephone service installed, they had to borrow the necessary funds from the Department, which reimbursed the funds from the subsequent increase in revenues (Ergas 1983). The allocation of the financial transactions of the PTT through the state budget led to an absorption of the revenues of the postal and telecommunications services by other public agencies without any large investments being made by the government in return.

By 1906 the government acknowledged the seriousness of the problem and transferred the Post and Telegraph Department from the Ministry of Commerce and Industry to the Ministry of Public Works. The problem of the inadequacy of the French telephone network, largely caused by insufficient funds and lack of financial commitment for network enlargement on the part of the national government was not addressed, however. The situation became even worse because of general political instability with a high turnover of PTT ministers and recurring budgetary problems, and the shift of the PTT department from being a ministry in its own right to one belonging to a larger ministry. Instead of encouraging the development of the telephone network, the central government gave priority to protecting the interests of the other branches of the PTT administration, namely the telegraphic and mail services, by providing them with funds to keep up performance levels. It was only after 1923, when the budgetary requirements imposed by the government became less rigid, that the financial position of the PTT improved. The PTT was granted permission to borrow and build up funds, and its budget was separated from the general state budget (Budget Annexe).

In those days, the management scientist Henri Fayol was asked to examine the then organisational form of the French PTT. Fayol (1921) concluded that the State was unable to manage an industrial enterprise, such as the PTT-administration, properly (his report was appropriately called *L'Incapacité Industrielle de l'État: Les PTT).* Fayol pointed out the following shortcomings in its corporate organisation and business policy: a) it was unstable and incompetent departmental management board; b) there was no long-term plan of action; c) no balance sheet; d) there was too much political meddling by politicians (deputies and senators); e) insufficient stimulation of diligence and rewards; f) lack of motivation and no-clear cut responsibilities. Overall, PTT was badly managed by the state, largely due to a 'mixed' management structure, based on seeking to combine political-administrative *and* corporate-industrial interests, and with instability and political interference as major results. Given the strong general interest in public services, Fayol (1921) suggested a concession-based system, in which the government would issue a longer term

concession to a private PTT-company (i.e. *Societé Anonyme*), with financial autonomy and freedom to hire and fire staff. To gain access to private capital and recover its large investments in the adequate upgrade of its networks, PTT ought to be granted a legal personality status and an exclusive concession to carry out business activities on behalf of the state. The private sector would be in a better position to manage the PTT and allow for a clear focus on the different administrative functions (forecasting and planning, organisation, command, coordination and control). The establishment of corporate autonomy for PTT, a concession-based system, and the application of modern managerial principles (e.g. unity of command/direction, scalar chain, span of control, regular managerial meetings, division of work and responsibilities, time keeping, etc.), together with the absence of political interference, would be manifestations of *industrialiser l'etat* (Fayol 1921: Annex).

Inspired by Fayol's criticisms, the de-nationalisation of French telecommunications was seriously examined. The government issued a legislative proposal whereby the French telephone network would be operated more efficiently by a French-based private company (Darmon 1985). One candidate to purchase the telephone facilities was the aforementioned SIT, supported by the *Banque Paribas*. The second applicant was the American firm ITT, which proposed both to operate the public network and supply the equipment required. These radical proposals for private (and foreign) network ownership were, however, opposed by the influential PTT employee associations; especially the communist CGT strongly supported the status quo. After extensive political discussions, the government rejected the ITT proposal by making clear that de-nationalisation would be 'contrary to the Republican customs of the country (Bertho 1984: 133)'. The revolutionary path was abandoned, and only modest reform measures were implemented, aimed at reorganising the PTT and luring ITT into the French equipment market. The equipment manufacturer ITT was compensated for its all too ambitious plan with large contracts for the upgrading of the public network. In the interbellum period ITT became a local producer by through the acquisition of two French firms, CGCT (formerly owned by Thomson Houston) and LMT, establishing a de facto monopoly as PTT's equipment supplier. Through the pursuit of a national responsiveness strategy, ITT effectively attempted to build up a base and to accommodate the peculiarities of the French market. The company decided to carry out R&D and manufacture switching equipment by two distinct subsidiaries located in France and accepted to license its systems to other domestic producers (Ergas 1983).

From 1923 onwards, when appropriate legislation was passed, PTT was instructed to operate like an administration with industrial and commercial purposes under a separate budget as an annex to the general Government Budget, that was also subject to parliamentary approval. The new budgetary framework allowed for some financial autonomy (i.e. external borrowing and depreciation were allowed) and PTT was required to cover its costs. In 1929 PTT was set up as an autonomous ministerial department within the state administration; the position of the telephone function *vis-à-vis* the much larger and established postal and the telegraph administrations was weak (Bertho 1981). In the 1920s and 1930, supply exceeded demand (e.g. the network in Paris was strongly oversized) and telephony was restricted to commercial

and professional use (De Gournay 1994). The PTT Minister, admitting and regretting the lack of subscribers, took various attempts to enlarge the number of people connected to the network. The various financial incentives for both subscriber and the PTT employee who managed to sell subscription (e.g. free connection of subscribers, bonuses), did not have a major impact, however.

During the Second World War, under Vichy government, a new institutional structure for telecommunications was laid, that proved to be very effective in the longer run, providing the basis for the goals of economic modernisation and industrial catching up in the 1970s and 1980s. First, a national public research centre, named CNET, was set up to strengthen the technological base of French telecommunications; this institution would promote and carry out R&D, jointly with equipment manufacturers and the public operator. Secondly, specialised institute for higher education in telecommunications engineering and management training was established, called *Ecole Nationale Superieure des Télécommunications* ENST. Besides its 'normal' task to educate and produce technical experts for the state bureaucracy and the state-controlled industries, ENST contributed to the creation of convergent views about industrial management and state leadership, and the development of professional ties among the future ruling elite ('esprit de corps'). Thirdly, the telephone and telegraph administration were put together in one Direction des Telecommunications, that was granted more corporate autonomy from central government.

Immediately after the Second World War, the separate telephone and telegraph directorates were combined into one telecommunications administration, called the *Direction Générale des Télécommunications*. Also the research activities, which had been fragmented until then, were concentrated in the CNET (*Centre Nationale des Etudes des Télécommunications*).

Although telecommunications modernisation was regularly mentioned and discussed in the various Plan consultations and negotiations, it only received sufficient support to be targeted as a priority sector at the end of the 1960s (Libois 1983). From the First to the Fifth Plan priority was given to the reconstruction and modernisation of the key industries of steel, energy, electronics, computing and aerospace and to promote trade and exports in these sectors.[1] The development and

1 Through the Plan Calcul, originally launched in the early 1960s, the French government pursued an ambitious strategy to catch up with American leadership in information technology. The need for this Plan became manifest, when the US Government prohibited the export of a Control Data supercomputer, that would be required for the development of a nuclear power force. By combining large public procurement programmes and a related concentration programme to rationalise the industry, the French government expected to build a solid domestic base in computing. To that purpose, the computing activities of CGE, Thomson and Schneider were merged into CII. When the newly created company CII decided to link-up with foreign business partners in 1973/74, the French government interfered. The pan-European Unidata-project, in which Philips (NL), Siemens (G), and CII (F) collaborated by merging their computing activities, was torpedoed by the French government. The creation of such a European computing champion, supported by the three national governments involved, included joint research and development, the combined production of computers and joint market sharing agreements. A year later, the French government, however, decided to pursue a go-it-alone strategy to block the cross-national venture and to give priority to fostering a national computing champion by consolidating CII with Franco-American company Honeywell-Bull.

commercial expansion of telephony in France was a long way behind the rest of Europe in the Interwar period. While countries like Germany, United Kingdom had density rates of about 6 per cent in 1938, France had only less than 4 per cent (Pinaud 1985: 57). When compared with countries of about the same size and/or level of economic development, the French statistics were striking. Its productivity and quality of services levels were extremely low, its tariffs were among the highest in the world and the network density figures showed an uneven pattern (cf. extremely low outside the Paris/Ile de France region). The official explanation of the 'anomaly or sickness' of French telecommunications referred to heavy network damages caused by three wars within a century and the absence of real demand before 1960. At that time the French telecommunications system was highly dispersed, lacking interregional connections and unequally distributed across the country. There were huge waiting lists and the technical performance of the telephone service was disappointing. The goal of universal service provision was given little priority: until the end of the 1960s telephony was still regarded as a luxury service or a 'gadget' that the French did not really need. Attali and Stourdze (1978) have qualified this phenomenon as 'the slow death of monologue in French society'. More in general, it has been argued that the diffusion of new information and communication technologies, (like the telephone, colour TV, video recorders), has been significantly slower in France than in other countries (Mattelart and Stourdze 1985).

Authors like Jannès (1966, 1970) and Rugès[2] (1970) have referred to more structural causes, like the obstruction of investments by the Treasury, the cross-subsidisation of the loss-making postal services by the profitable telephone services, bad coordination between the central and local governmental authorities, political scandals, the capture of the DGT by dominant foreign equipment manufacturers and by the *caste* of engineers (*Polytechniciens*). For the expansion of its network the PTT administration could not be certain of adequate investment funding, given the constraints on domestic tariffs set by the government, instead it finance its own investments. Furthermore, in the after-war period the telecommunications function suffered from the supervision of the Postal branch and lack of internal coordination and integration within the Telecommunications branch, both severely handicapping its functioning. Traditionally, the French PTT had been dominated by the Postal branch, in terms of workforce, appointed senior officials, and standardised job qualifications and better access to ministerial cabinets and local/regional governments. Furthermore, there was a strong rivalry between the corps of engineers on the one hand and the corps of administrators on the other: the first group had a technical-engineering background, was educated at the École Nationale Supérieure des PTT and appointed at the central R&D departments or other staff units, or at the regional/local management levels of the organisation; the second group of general officials as a rule was educated at the École Nationale d'Administration and was selected to work at the Paris headquarters. Finally, the performance of the French telecommunications system was disappointing because of the highly-dispersed and collusive character of the domestic equipment industry (to a large extent foreign-

2 Ruges is the anagram of (Avenue de) Ségur, where the PTT Ministry is located.

owned), not allowing for any substantial economies of scale or any real competition among producers and leading to overpriced charges for supplies.

Although most of the symptoms of the French telephone crisis were already identified in an official report as early as 1947, the modernisation of the telecommunications infrastructure only received governmental priority in national economic planning in the 1960s (Libois 1983). After the reconstruction and rationalisation of the key industries (e.g. coal, steel, chemicals etc.) had been dealt with effectively in the first four Plans, the rationalisation and modernisation of the domestic telecommunications industry now moved to the forefront. The underperforming French telephone system, characterised by poor productivity and quality of service levels, low density rates, and tariffs that were amongst the highest in Europe, ran into structural problems, when demand suddenly increased in the early 1960s, making the waiting list go up from 100,000 to 370,000 in 1966 (Jannès 1966). The public and political debate was dominated by *la crise du téléphone*; in common parlance people joked about *'half of France was waiting for a telephone, while the other half was waiting for a dialling tone* (Ergas 1992).'[3] In the Fifth and Sixth Plans the deficiencies of the French telecommunications sector were acknowledged by the Pompidou and Giscard governments and the political target for the longer term became to catch up with European competitors. Between 1967 and 1975, a coherent framework of credit institutions was created to aid DGT in raising capital for large-scale network investments and hence reduce its self-financing ratio consisting of the *Caisse Nationale des Télécommunications* CNT and its related agencies Finextel, Codetel, Agritel, Créditel and Francetel.

Between 1967-78 the French PTT Ministry was reorganised: the Direction Generale des Télécommunications was officially separated from the Directorate Générale de la Poste, each having separate accounts. In 1969, the Minister of Finance, M. Giscard d'Estaing, suggested carrying the reform measures even further by proposing a bill to establish an independent public telecommunications entity with legal personality and financial autonomy from the state, to be called *Compagnie Nationale du Téléphone*. The radical suggestions were channelled into more moderate proposals by a high-level interdepartmental committee, that had been established in 1971 to make recommendations concerning the reorganisation of the PTT administration. This Committee, that included representatives of the Prime Minister's Office, the Treasury, the PTT Ministry, the Home Office and the Council for State Enterprises, proposed keeping the postal and telecommunications services integrated within the PTT administration, but separating these two functions in terms of budgeting and labour contracting. IN 1973, the *Commission Parlementaire de Controle de Gestion de Service Publique de* Téléphone was installed to examine any reforms that would improve the management of telephony (Bertho 1981). It suggested to transform DGT into a government corporation like EDF. The opposition

3 Even NATO became concerned over the safety and military implications of the structural weaknesses of the French telecommunications network. For that purpose, NATO contributed to network modernisation by providing more than 40 % of central government funding of telephone investments between 1951-55 (Ergas 1983).

to the core elements of the restructuring plan, to separate the Telecommunications function from the Postal services and allow it the structure of a public enterprise, was fierce, manifesting itself in the paralysing strike of 1974. The Government considered the recommendations of the consultative bodies as too radical, opting instead for a massive infusion of investment.

In its famous *Plan de rattrapage téléphonique* of 1970, the French government put forth an impressive proposal to expand and modernise the domestic telecommunications system to reach the capacity and automation levels of its neighbours Germany and the United Kingdom within ten years. It stipulated clear objectives for network growth and the modernisation of the public infrastructure. This programme also aimed for market leadership and large exports for the French telecommunications equipment industry. In the VIth Plan, that started in 1971, the government reserved FFr 45b to give the entire population access to the telephone service and transforming the equipment manufacturing into a high-technology industry that would compete successfully in export markets. The CNET was in charge of developing new technologies and making French telecommunications manufacturing independent of large American firms.

In the VIIth Plan the CNET was stripped of all industrial policy functions apart from R&D; the DGT became the central coordinator of this ambitious programme to upgrade and expand the network. In order to give the DGT sufficient leeway to make these plans possible, DGT was granted certain privileges to borrow more easily, relieved of the constraints of the Ministry of Finance, and given a direct reporting link to the President. Within the government administration post and telecommunications were functionally separated. The main instruments used by the state and the DGT to modernise and expand the telephone network were direct subsidies (a massive R&D programme in the field of public switching) and public procurement. For its financing PTT relied upon the internal resources through debits and profits, and loans through the public *Caisse Nationale des Télécommunications CNT* and additional financing from private investors. The national infrastructure was transformed from one of the most backward in the Western world to one of the most advanced: between 1973 and 1983 the number of telephone lines increased from 5.6 million to 20.9 million at a growth rate of 12.2 percent (Germany 7.2 %). In the same period the PTT Ministry itself was also modernised to give DGT more corporate autonomy and flexibility to realise its objectives: for example DGT was allowed to set up subsidiaries under private law in commercial fields such as terminal equipment, value-added services and datacommunications.

The large-scale modernisation programme of the French telecommunications infrastructure was not only directed at expanding the telephone system throughout the country, but also served the industrial objective of catching up in telecommunications technology. The public programme envisaged a large procurement base for the French equipment and electronics industry for newly emerging markets. In 1975, the government made it clear that it wanted to retain control over the nation's key industries and the subsidy flows by creating strong national champions in the electronics industry and minimising foreign competition.

The government accused the manufacturers' cartel between CGE, ITT and Ericsson as being one of the causes for the relative backwardness of French telecommunications (Nouvion 1982). In 1976, the government actively intervened in the purchase of the subsidiaries of the foreign equipment manufacturers ITT and Ericsson (LMT and SFT, respectively) by the French firm Thomson-CSF.

In the VIIth Plan (1976-1980) telecommunications was defined as a national priority and within this industry the emphasis was on network expansion to the level of other European countries, improving the quality of service, the development of new applications (e-mail and datacommunications) and tariff controls linked to RPI. The budget for the VIIth Plan to upgrade French telecommunications tripled to approximately FFr 140b (from an investment level of FFr 5.2b in 1971, to FFr 15b in 1976, to FFr 26b in 1977). The DGT was freed from the tight financial controls set by the Treasury to restructure the French telecommunications sector: the annually controlled budgets were replaced by a five-year period of budgetary freedom. After the *grand projet* of the 'telephoning of France' a new target was set for the mid-term with the *Plan Télématique*.

In December 1976, President Giscard d'Estaing appointed a small committee, headed by Simon Nora and Alain Minc, to investigate the computerisation of society. The Nora-Minc report (1978), submitted to the President in January 1978, presented a lucid analysis of the economic crisis in France, the impact of new information and communications technologies upon society (unemployment, job creation), and the opportunities it provided for increasing productivity in particular sectors (banking, insurance, education, social services, public administration) and overall economic growth. The Nora-Minc report referred to the dominance of foreign multinational corporations in the world electronics market: the American multinationals IBM and AT&T were market leaders in computing, telecommunications and semiconductors and the Japanese companies in consumer audio-visual products. The Nora-Minc Report was very much concerned about IBM's move into the telecommunications domain through the creation of its satellite ventures SBS and Comsat. Assuming a techno-economic convergence of these technologies in the near future, the Report warned about the danger of a loss of national sovereignty in these critical industries to foreign multinationals and the serious challenge to the public monopoly of the European PTTs. The Report, identifying telecommunications as a key industry, called for a comprehensive national and European strategy to meet the challenge of American domination in both telecommunications equipment and information services. The European authorities, the central governments and the PTT administration, could counter the ambitions of IBM and AT&T by working together in setting norms and standards (e.g. in the CEPT framework). Given the divergent interests of the computing and the telecommunications industry, the European PTT's could catch up with the two American giants, by joining forces with AT&T and compete against IBM.

The Nora-Minc Report argued that given France weak position in the computing industry and consumer electronics, the future of compunications or tele-matics (the cross-fertilisation of telecommunications and informatics) lay in state control of the

telecommunications infrastructure. Therefore, France should maximise its advantages via the control and modernisation of the network. For example, the usage of advanced tele-information services would be encouraged by way of promoting the development of new high-capacity channels, like satellites and data transmission networks. Nora and Minc suggested that the convergence of telecommunications, informatics and office automation had far-reaching policy implications and therefore proposed a reorganisation of the ministries and public sector organisations concerned. In order to respond more quickly to the techno-economic and international challenges, an organisational restructuring of the French PTT was required. Firstly, the DGT needed to adopt a more commercial and business-like approach and decentralise its responsibilities. Secondly, a separation of the postal and telecommunications business of the French PTT was also regarded as necessary. The traditional consolidation of the Telecommunications and the Postal Function in the PTT Ministry was challenged by the aforementioned structural developments, revolutionising the capital-intensive telecommunications services and leaving the labour intensive postal services relatively untouched. The identification of telecommunications as a strategic industry called for a leading position of the DGT in the promotion of a national tele-matics strategy. For that purpose a state enterprise could be established with special privileges regarding its budget and investment policy and a flexible personnel policy to recruit and select highly qualified personnel. Thirdly, the relationships between DGT, TDF (the broadcasting transmission authority) and also CNES (space), then unclear and not well-defined, needed to be redefined and regrouped. Formerly the three respectively belonged to the PTT Ministry, the Prime Minister's Office and the Ministry of Industry. Nora and Minc suggested that a large Ministry of Communications needed to be formed that would integrate these crucial agencies in the domain of tele-matics. The government endorsed the broad outlines of the Nora-Minc plan, in which the state actively promoted the supply of and demand for computers and data services.

The idea underlying the Nora-Minc report, namely the development from 'telephony' to telematics' was further elaborated in the VIIIth Plan (Pigeat & Virol 1980). After the targeting of network expansion and modernisation, as set in the VIIth Plan, the new objective became to adapt the French telecommunications industry to the new techno-economic conditions. A filiere approach was suggested, aimed at strengthening the various areas and linkages in the emerging telematics sector (Lorenzi & Le Boucher 1979). A collaborative effort was needed that included the coordination of initiatives in the domain of integrated circuits, opto-electronics, fibre optics, software, terminal equipment, network upgrading, service development, and the education and training of systems engineers and personnel (Pigeat & Virol 1980). Besides supporting the ongoing expansion of the French telephone network (from 12 million subscribers in 1980 to 24 million in 1985), the Planning Commission gave priority to the following issues: the further upgrading and digitisation of the infrastructure, the nation-wide provision of basic telematic terminals (i.e. Minitels), the active promotion of telematic services for business customers (e.g. dataprocessing, videoconferencing) and the active pursuit of new high-quality telematic technologies (videocommunications, satellite and radio

technologies, pay-TV etc.). The Nora-Minc Report, and the consequent planning proposals, inspired the Minister of Industry to put forward a national action programme for the French electronics industry. This *Programme d'Action par la Filiere Electronique* (PAFE) sought to restructure the industry through nationalisation, to increase R&D spending by both government and industry, to promote the diffusion of technologies through large national projects, to oblige French companies to buy French, and reform the education system to produce more qualified personnel (MRI 1982; Groenewegen 1989). The DGT, controlling the vital telecommunications infrastructure, was instructed to mobilise and revitalise the French electronics industry, leading it towards greater international competitiveness.

The successful society-wide penetration of the telephone in the early 1970s had made the DGT one of the most powerful administrations in the French civil service. In the new plan DGT received large subsidy schemes to upgrade and digitise the network and to prepare an effective industrial shift towards tele-matics. The DGT acted both as an administration, that was given the responsibility for the state's industrial policy towards *la Filière Électronique* and as a flexible public sector company, actively promoting and developing new systems and services. DGT was also allowed to establish a number of separate subsidiaries under private law with private sector participation. These mixed affiliates (or 'Sofres') were considered an effective instrument to stimulate diversification of the public enterprise on the one hand and utilise public resources for the stimulation of the private sector, on the other. Under the socialist government the leading firms of the French electronics industry were nationalised and restructured into the following national champions: CII-Honeywell-Bull (computing), CGE-Alcatel (telecommunications equipment and office automation), Thomson and Matra (semiconductors and electronics).

As early as in 1978 the DGT had launched one of the first packet-switched datanetworks in the world, called Transpac, on which the various enhanced data services could be transmitted. One year before, Transpac was created as a subsidiary of DGT, set up as a hybrid public-private organisation of large users and the DGT: 67 per cent of the shares were in the hands of the state, the workforce of the company owned 5 per cent and the large users (Crédit Agricole, Havas, UAP, Renault etc.) possessed the remainder of the shares. In 1984/85 DGT acquired the private shares and Transpac was placed under control of the state holding Cogecom. Transpac turned out to be a commercial success: its high quality level and distance-independent tariffing attracted a large number of subscribers.

In the late 1970s and early 1980s the government pursued a sequential targeting strategy regarding the French telematics and electronics industry: the first aim was to establish mass consumer markets for relatively simple IT applications, the second aim to export these applications successfully. The ultimate aim was to produce more sophisticated and high-tech applications. In the *Grand projet Plan Télématique* the national government (or DGT) played a powerful role: it determined the technology, selected or created the firm(s) suited to the development desired, created guaranteed demand for the product and/or assumed a significant share in the financial burden of development in an initially protected market. After the military, DGT became the

second biggest investor in the country by that time. Besides an integrated network that could provide a variety of telematics services, four main service groups were identified: videotex, the electronic directory, mass fax and tele-writing. In this Priority Action Programme DGT was given a five-year concession with budgetary freedom. DGT effectively managed to pursue its own organisational-political goals of consolidating and expanding its public monopoly by providing additional services to the mass public. The Telematics Programme had the objective of protecting and supporting the interests of the domestic industry by developing an effective market at home and abroad. The state-directed commercialisation of information technology worked at home, giving the French industry a captive market, but failed to made major inroads in international markets so far. The exception to these export failures are Transpac (France Télécom's datanetwork), ISDN and to -a certain extent- Teletel/Minitel (DGT's videotex system), three spin offs of the Telematics Programme.

When the DGT had successfully modernised the telecommunications infrastructure in 1978, two new challenges emerged: the state of the directory assistance services was rather poor and the POTS-market (plain old telephone services) was nearly saturated. The DGT saw the development of its videotex system Teletel/Minitel as the adequate remedy to both problems. The electronic provision of inquiry services would be more efficient than printing and distributing phone books and running a telephone information service, that was regularly overbooked and out of order. A videotex system would not only generate more traffic but would also facilitate new information and communication services for the general public and business users. The DGT followed an ambitious implementation strategy, aimed at creating a mass market by purchasing videotex terminals in large quantities and giving them away for free to residential and professional users.

The Teletel/Minitel system was connected to Transpac, the packet switching datanetwork of DGT, enabling subscribers throughout the country to use the various information and communication services regardless of distance. The French videotex system was one of the first offsprings of the Nora/Minc Report aimed at identifying the potential of tele-matics and its impact upon society, to be put into practice. After its experimental try-out in 1978, Minitel was officially introduced by the DGT in 1983. DGT's expectations for the society-wide diffusion of Minitel terminals was very optimistic: it expected to have 30 million terminals installed in 15 years (Cohen 1992). One application that could justify the development and introduction of videotex, as identified by the DGT, was the provision of a national electronic directory service through Télétel/Minitel, that would replace the printed telephone directories and the DGT's traditional inquiry services. Being at the same time entrusted with the responsibility to stimulate the interests of the French telematics industry, the DGT asked the domestic computer hardware manufacturers and the computer services sector to develop an appropriate low-key terminal, that could easily be mass produced. After the prototype of the Minitel terminal had been developed, DGT decided to combine the aforementioned objectives of establishing an integrated electronic inquiry service and the large-scale diffusion of terminals. The DGT followed a supply-driven strategy that was aimed at enhancing the

availability of electronic directory services through cheap and easy to use terminals that would be supplied free to subscribers (Charon 1987).

In its experimental stages the DGT's experiment with videotex was opposed by the publishers, who saw the freedom of expression and the written press culture threatened (Charon & Cherki 1984). The introduction of telematics would imply the availability of alternative distribution channels and the draining away of advertising revenues to new players on the information market place, notably the DGT, computing companies and new information providers. After an agreement was reached between the DGT and the press about a clear-cut division of labour, the Minitel/Télétel turned out a commercial success, with 4.2 million subscriber in 1988 and more than 6.5 million in 1994 (France Télécom Annual Report) 1988-1994). Besides acting as a common carrier providing the appropriate infrastructure and user terminals, the DGT restricted itself to the provision of gateways, common billing and menu functions, and the 'basic' electronic directory services. The publishers, computer service providers and information providers were involved in the rendering of a variety of information, communication and transaction services (e.g. teleshopping, message services, tele-reservation etc.) and supplying software applications and the non-standard terminals and peripherals. After the failure to develop billing systems based on smart cards and the unfeasibility to introduce subscription-based charges, the DGT and its business partners developed a lucid billing system. This so-called 'Kiosk' system is based simply on the consumption of the telematic service to be collected by the DGT, who passes a certain proportion of the usage charges on to the service providers. This proportion is set through bilateral agreements between the DGT and the various information and service providers. The Kiosk systems allows for flexible price setting and transfer pricing between the DGT and service providers through the creation of different charge bands on the one hand, and saves users from subscribing for individual services, without the DGT intervene in the content of services, on the other (Charon 1987). Later the same 'Kiosk' billing system was implemented by France Télécom/DGT for the provision of audiotex services.

Under the Socialist Mitterand/Mauroy government DGT lost its financial autonomy, granted by the previous government, and like before was obliged to subsidise the general budget. DGT became also involved in the new objectives set by the Socialist government to promote the French electronics sector and cable policy. In 1982 the DGT was given full control over the ambitious five-year Plan Filière Electronique, scheduled to promote the French electronics sector and to rationalise the loss-making firms Bull and Thomson. However, it also implied that DGT's revenues were used by the French government as a 'cash cow' to restructure and finance other troubled segments of the French electronics industry (notably computing, Bull, and semiconductors, Thomson). Confronted with the international deregulation trend, the Socialist Government was supported in its desire to preserve the status quo by the workforce of the French PTT. The labour unions defended the necessity of DGT's monopoly by referring to public service requirements and the French nation's independence in high technology matters. The *Corps des Ingénieurs,* organised in the AIT, comprising much of DGT's senior management, in largely

agreed on these matters, but demanded at the same time more corporate autonomy for DGT in shaping technological and market conditions. AIT opposed the practice of DGT's revenues being used to subsidise the unprofitable post and nationalised sectors. It demanded that the postal and telecommunications branch be separated and that the DGT be given more corporate autonomy from the government. Supported by the Director-General of Telecommunications, the administrative-technocratic elite of the DGT argued for a public enterprise status (Cohen 1992; Barreau 1995).

6.5 *De-monopolisation of Telecommunications in France (1986-1994)*

In the Liberal-Conservative years the status of the powerful DGT -as public operator, commercial service provider, executor of industrial policy and regulator was questioned. The field of value-added services stayed in the hands of the all-powerful DGT/France Télécom, that was concerned both with safeguarding its common carrier monopoly status, and even more ambitiously, with ensuring its future control of the promising new value-added services. The Liberal-Conservative Minister for PTT was in favour of telecommunications reform in order to bring France in line with the international developments. One of his first acts was to remove the competence the Socialists had given to the DGT for the direction and execution of industrial policy in the *filière électronique*.

The Liberal-Conservative government proposed legislation that would establish modest competition in the telecommunications field by the end of 1987. The Minister for PTT Affairs, M. Longuet (1988) identified three structural weaknesses of DGT/France Télécom: its large debt, social policy constraining flexibility and international presence and lack of competitiveness. In order to bring France more in line with the changing economic reality of the times, the markets of value-added network services, cable TV networks, and mobile communications were to be liberalised. The proposed measures did not really touch upon DGT/France Télécom's monopoly on the installation and operation of the public infrastructure and the basic voice and databearer services, however. According to a legislative proposal, presented to Parliament in 1987, the DGT should be transformed from a government department into a state-owned plc-company (*Société Nationale*), operating with a much greater degree of commercial autonomy from the state, like the French railways SNCF or the electricity utility EDF. This newly established telecommunications company would be separated from the Post Office branch. France Télécom would be supervised by an Administrative Council, in which government, staff and independent experts were represented. Furthermore, Minister Longuet suggested that two existing institutions should become involved in French telecommunications policy making: CNCL, the semi-autonomous broadcasting transmission agency would regulate access rights to information and the Competition Authority (*Conseil de la Concurrence)* would regulate the provision of public infrastructure and basic services.

Notwithstanding complaints about an overcentralised organisation, lack of financial autonomy, enormous debts caused by France Télécom cross-subsidising the loss-making electronics industry, the majority of the workforce was against any

major changes. France Télécom's staff was strongly attached to their civil servant status and public service tradition and opposed such a prospective corporatisation (or pseudo-privatisation) and neo-liberal solutions (e.g De Guers 1987)[4]. The very influential *Corps des Ingénieurs des Télécommunications* and the powerful public sector unions had made their opposition to the government's radical plans very evident indeed: more than 50 per cent of the entire workforce went on strike. After two years of liberal-conservative rule the policy outcomes were mixed. The new administrative body CNCL had proved itself to be very weak and lacking sufficient instruments and autonomy from the state. Nevertheless, some impressive results were achieved by the right-wing government: the creation of cellular duopoly (opening the network monopoly of the DGT), the liberalisation of the VANS market, and private sector participation in cable network operations. The government also sought to increase market transparency by separating DGT's operational from its regulatory activities and creating separate subsidiaries for DGT's competitive activities (i.e. preventing anti-competitive cross-subsidies). The relatively organised workforce strongly opposed the proposal to separate the Postal and Telecommunications Services, and objected to any attempt to turn the organisation into a state-owned company through massive industrial action campaigns. The small but influential trade unions, the CAT and FO, vehemently defended the unity of the postal and telecommunications administration, the civil servant's statute, and its attractive 'fringe' benefits (pension schemes, sick benefit fund, and job security).

Under the socialist government the proposal to change France Télécom into a commercial company with public capital was dropped and replaced by the idea of a powerful public service. When the Socialists returned to power the Minister in charge, M. Quilès, emphasised the public service responsibilities of the DGT and the proposals to prepare France Télécom to become an independent public corporation, along the lines of EDF, were shelved. At the end of 1988 M. Prévot, a top civil servant, was asked to organise a public debate on the role of the PTT services in the present and the future. M. Prévot drew up a draft report that formed the basis for a long series of national and regional consultations with management and employees of the two PTT administrations, industry, consumers and other stakeholders between December 1988 and June 1989. The Prévot Report recommended the formal separation of the postal and telecommunications services, replacing the state administration statute by that of an industrial and commercial public enterprise (Prévot à Quilès 1989). The policy debate focused on the definition of public service missions, regulation and competition, human resource management issues in the postal and telecommunications administrations, and corporate autonomy. After six months of intensive discussions consensus was reached on the aforementioned issues (Prévot à Quilès 1989):

4 A publication written by De Guers (1987), a collective of DGT-employees using another anagram of Avenue de Ségur, explicitly discussed the disorder France and the DGT may face in the global telecommunications battle. The policy response, suggested by the authors, referred to retaining a strong and integrated public 'DGT', exclusively providing the basic services and key infrastructures, and playing a leading role in the electronics industry.

- a further separation between the postal administration and the DGT and more autonomy of the two companies from the state was suggested, but the two companies would remain under the state's sponsorship and budgetary supervision (i.e. subject to public law);
- the role and the mission of public service was to serve customers, the modernisation of the economy, *and* the competitiveness of domestic enterprises;
- a balance between public monopoly, controlled competition and full competition: for the basic infrastructure and voice telephony an exclusive regime (justified by cost scale and scope economies, network integrity, public service, and strategic resources); for cellular and databearer services and independent 'private' networks, managed competition; and for value added services and terminal equipment, a free and open market regime;
- more corporate flexibility for the two companies in their internal management ('autonomie de gestion' in hiring staff, and in financial matters and business operations) and in their external management (e.g. setting up new businesses and subsidiaries, allowing for strategic alliances at home and abroad).

Although a few minor amendments were made dealing with job security for employees, the proposed plan passed the National Assembly and the Senate in May 1990. The new telecommunications legislation, as laid down in two Acts that succeeded the 1923 Act, was in line with the Community Rules on the effective opening of distinct markets and the separation of operational and regulatory functions. The first Act (No.90-578, which was passed in July 1990, was related to the organisation of the provision of the public postal and telecommunications services, the second (No.90-1170), which was passed in December 1990, referred to the regulation of the postal and telecommunications sectors. The July Act stated that France Télécom would be separated from La Poste and its sponsoring Ministry. From early 1991 onwards France Télécom would be established as a relatively autonomous public corporation (*'exploitant autonomes de droit public'*) a tailor-made state-owned enterprise), entrusted with corporate legal status. Although remaining under the guardianship of the Ministry of Post and Telecommunications, France Télécom finally had a large degree of autonomy to posses assets, draft budgets and be responsible for its own management and business policy. The composition of the Board of Directors (*Conseil d'Administration)* would be tri-partite, made up of state officials, staff representatives, experts and representatives of user groups. The government would nominate the President of the 21-Member Board for a three year term. France Télécom's significant business decisions were still subject to state scrutiny and its longer-term plans needed political approval. France Télécom management had to draft a mission statement that needed government acknowledgement. The statement referred to the company's provisions to achieve the goals set in its mission, the contribution of France Télécom to the objectives set by the national government and its relations with consumers and local authorities. The company's workforce would retain its civil servants' statute and labour unions representatives would have a say in salaries and staffing levels through their

membership in the *Commission Supérieure du Personnel et des Affaires Sociales*. Two new consultative bodies were established as an interface between France Télécom and its institutional environment, the *Commission Supérieure du Service des Postes et Télécommunications* and *Conseil National des PTT;* the former representing independent experts and the socio-political and business various stakeholders in the French telecommunications sector, the latter representing the Ministry, management and labour of La Poste and France Télécom discussing R&D and training issues.

The influence of the state and the public sector unions in the newly established public enterprise was still substantial. France Télécom would still be answerable to the sponsorship (*tutelage*) of the Ministry of Post, Telecommunications and Space. France Télécom and the supervisory Ministry also had to agree upon a three-year planning contract (*contrat du plan*), in which regulations were set dealing with corporate strategy, the quality and tariffs of its services, wage policy, investment levels and other substantial financial decisions. Within the PTE-Ministry, the Direction des Services Publiques was responsible for the reserved services and the newly created Direction de la Réglémentation Générale was in charge of the competitive services. Furthermore, France Télécom had to negotiate its budget with the Government and contribute towards the huge financial losses of the state companies Thomson and Group Bull. In addition the Cogecom subsidiaries, including TDF, Transpac and FCR were all removed from the control of the Finance Ministry. The position of the PTE Minister was downgraded that of Under Secretary of Finance, Economy and Budget.

After the landslide election victory of the Liberals and Conservatives in 1993, the issue of hiving off France Télécom to the private sector was once more was put on the political agenda. In order to reduce its heavy debt burden the government considered partial and gradual privatisation as a possibility: it envisaged a floatation of 10 per cent within a three year period and a maximum of 30 per cent sold to private investors within seven years. To anticipate opposition from the powerful public sector unions, the government considered France Télécom's workforce remaining civil servants. In 1993, M. Longuet, the minister in charge of trade, industry and telecommunications, argued, that in order to respond effectively to the liberalisation of the European telecommunications market by 1998 and to allow France Télécom to link up with other telecommunications companies, a change in its legal status was necessary. The French Government proposed to transform France Télécom from an 'autonomous operator under public law' into a joint stock company, with its own capital. A reform of its legal status would allow France Télécom to swap equity stakes with industrial partners and enable the central government to privatise the company. In order to integrate the strategic alliance with the Deutsche Bundespost even further, the share capital of France Télécom could be opened up to industrial partners. The government, however, would retain majority control over France Télécom and only a minority of its shares would be sold. The plans of the Balladur government (1993-95) to privatise France Télécom produced an outcry, after which the proposals to reform the national telecommunications company were shelved for another time. More than 80 per cent of the workforce went on strike

(including a large number of senior officials) in October 1993, fearing layoffs and the end to their civil servant status. France Télécom's staff argued there was no need for structural change: the country already had outstanding levels of quality of service provision and one of the best equipped networks in the world (e.g. Leray 1995).[5] A potential privatisation would go against the public interest and challenge the industry's public service tradition and would only benefit private investors like Alcatel, national banks and foreign investors that considered taking a minority stake in France Télécom. The French labour unions, together with their German counterparts, also acted against the proposed strategic alliance of the Franco-German Atlas joint venture with the US-based company Sprint, because of its anti-union activities. The French and German unions expressed fears about workers intimidation by Sprint and demanded their Board of Directors to hold up the negotiations until Sprint would recognise workers' rights to organise.

In 1994 the French Government asked M. Théry, the driving force behind the successful Minitel diffusion and former head of the DGT, to formulate an appropriate strategy concerning the viability of the integrative broadband networks in an increasingly deregulated telecommunications world. Although the functioning of competition and the utilisation of some market-led mechanisms were widely acknowledged abroad, Théry (1994) suggested a further continuation of the French approach by emphasising state guidance towards the development of a nation-wide fibre optics infrastructure by 2015, that would be accessible to and link every citizen and corporate actor. The investments of upgrading and creating an advanced broadband network, estimated between FFr 150b and FFr 200b, should be borne by France Télécom (Financial Times 27 10 1994). The Report exhibited a clear technology push strategy, in which infrastructure provision would act as a catalyst for new uses and new services. Only little attention was paid to existing and future demand for these so-called 'broadband' services, and the alternative of competitive network provision was totally ignored (e.g. coax cables, satellite, mobile networks).

In his analysis, Théry made clear that the traditional low-capacity services, such as telephony and Minitel/Télétel were in the saturation stage of their product life cycle and that an integrated approach was needed towards the entire telecommunications and multimedia *filière*. Priority needed to be given to the upgrading of the public infrastructure by the large scale utilisation of fibre optics, the targeting of cable development, the promotion of new switching technologies (ATM) and the commercial application of a variety of multimedia services. While stimulating the commercial development of high capacity networks and services such as digital television and video services, Théry suggested that universal service and open network provision requirements were safeguarded in the next decade. In order to promote the development of new technologies, infrastructures and services effectively, the Report asked for clear political and financial support of the Government. For instance, additional resources were needed to fund applied R&D and the upgrading of network engineering expertise and the promotion of pilots in

5 A. Leray (1994) is an anagram for (Place d') Alleray, where France Télécom's headquarters is located.

which public and private actors could develop new information and communication services in the domains of health, education, culture and public administration.

Théry's inquiry into the public infrastructure of the future was complemented by a sectoral analysis of the major technological, economic and international developments in France's tele-services market in the short and longer term. This prospective study investigated the commercial possibilities of a multitude of service applications in sectors like health care, education, commerce, public administration etc. (Breton 1994). The Report also warned against the potential risks of an emerging global tele-services market. For instance the outsourcing of information processing activities to neighbouring and/or developing countries and the de-localisation of business activities could lead to a brain drain of technological expertise and have negative effects upon domestic employment. The overall aim of these two reports, prepared by Théry and Breton, was to establish a technologically advanced and competitive telecommunications industry that would fully utilise the high-capacity infrastructure and trigger the large-scale provision of a multitude of tele-services for both business users and households. Although less explicit than before, the public administration was expected to lead the diffusion of new multimedia services throughout the country.

6.6 *The Liberalisation of the French Telecommunications Market*

The Liberalisation of Networks

The Plan Câble of 1981 envisaged an interactive fibre optics network, that could transmit sound, voice and data. According to the central government the Cable Plan should accomplish the following goals (Vedel 1987; Vedel & Dutton 1990): develop innovations as a solution to the economic crisis facing France at that time (e.g. the promotion of new markets and employment), support cultural aims (e.g. domestic production and distribution of broadcasting programmes, and hence the preservation of the French culture) and implement decentralisation policy (e.g. by giving more powers to the local and regional authorities). Initially, the development and the construction of cable systems received little priority from the key players in the domain, namely the PTT/DGT, the TDF and the publishers. The first was fully occupied with the upgrading of the telecommunications infrastructure and the development of telematics, the second showed a bigger interest in direct broadcasting by satellite (TDF) as alternative transmission channels, while the local press was concerned about the potential impact of cable distribution upon advertising revenues.

In the developing institutional setting, the authorisation of cabling would be given by the *Haute Authorité de la Communication Audiovisuelle (HACA)* and the actual instalment and diffusion of broadband cable networks was carried out by France Télécom, in collaboration with the local authorities. Originally, cable systems were the responsibility of the national broadcasting transmission authority TDF, but after the acquisition of TDF in 1980-81 by the DGT, PTT was given full control over the construction and the technical operation of these cable systems. For the development of cable networks the government promoted a partnership between DGT and local

municipalities in the financing of the investments. The actual operation of these cable systems was in the hands of so-called *Societé Local d'Exploitation du Cable SLECs.* These companies, in which both municipalities and private investors could participate financially, would lease the cable facilities required from the DGT. Especially the *Caisse des Depots et Consignations* CDC and two water utilities, namely Compagnie Générale des Eaux, and Lyonnaise des Eaux have become active in the French cable market. The Cable Plan, due to disappointing penetration, failed to be a success. The cabling project suffered from an institutional separation between the construction and exploitation of the network and a reluctance on the part of the local communities to engage in the sponsoring of the various cabling projects. Between 1987-94 the market for cable networks was modestly liberalised: the government encouraged the involvement of private investors in installing and operating these cable networks through enlarging private sector participation in these public-private cable ventures. Early 1994, CDC decided to leave the cable market all together and sold its cable networks to France Télécom and to CGE.

The Liberalisation of Services

In 1987, a beginning was made with the liberalisation of value-added services and it was not until 1993 that full liberalisation was implemented. This 'delay' was due to the government imposing significant restrictions on firms entering the sector, arguing that VANS would be a serious threat to network integrity and open the door for 'bypassing' the public infrastructure. In the mobile market, effective competition was introduced from the early 1990s onwards. In 1989, a second mobile communications license was awarded, next to France Télécom's *Radiocom 2000,* to the SFR-group *Société Francaise du Radiotéléphone.* In the SFR-group the following major partners are represented: the water utility having diversified into CATV, Compagnie Générale des Eaux (41 %), Crédit Lyonnais (19.9), Navigation Mixte (8.6), TDF Télédiffusion de France (7.5), Vodaphone (4), Bell South (4) and some smaller participants. The rationale behind this duopoly on mobile or cellular communications was to create a level playing field, in which the two providers would operate under strictly identical conditions with equal rights and possibilities. Initially, competition between the two mobile operators was restricted: the expansion of SFR's network was constrained by limited spectrum availability and lack of collaboration from France Télécom, both contender and supplier of fixed network links, to ensure interconnectivity. In response to complaints from SFR about high interconnect and leased lines fees to France Télécom, the Minister of Communications gave permission to use the cable networks and microwave links as alternatives to the France Télécom's network. In the cellular market SFR acquired a market share of approximately 25 per cent. So far radio-based service competition has not offered a major threat to the fixed infrastructure and the local loop to the customer. In 1993 Alcatel and the French construction company Bouyges (together with among others Cable & Wireless, Veba (Germany) and US West) made a bid for the license to operate a Personal Communications Network PCN. In October 1994, the license to operate a third mobile network was awarded to the Bouygues consortium; the loser Alcatel responded by acquiring a 20 per cent stake in the winning joint venture.

Although competitive network provision was prohibited, limited resale of capacity was allowed for some data services in 1987. In order to prevent arbitrage, tariffs were set by the government. A few years later the rulings on the sharing of leased circuits and traffic capacity resale were loosened for the supply of value added services and datacommunications services to closed user groups (commercial voice resale was prohibited). The limited liberalisation of terminal equipment and value-added services was legalised in 1990 with the enactment of the new telecommunications legislation. When the European Commission proposed in 1989 to liberalise data service provision, France protested, arguing that network operators should be given authority to issue licenses and levy access charges on private VAN operators. France also led the opposition to the EC Commission's Open Network Provision. All value-added networks required a license and tariffs were set to prevent arbitrage. In 1991 satellite communications licenses were issued to several companies, including France Télécom, British Aerospace and Reuters.

After BT had already been licensed, the Swiss/Dutch/Swedish operator Unisource was granted a license late 1994 to operate value-added network services in France. The decision to introduce network competition was, however, postponed, following a nation-wide strike by France Télécom employees, protesting against the government's privatisation and liberalisation initiatives. After the negotiations between France Télécom and Deutsche Bundespost to merge their global activities early 1994 (the 'Project Atlantic') came to nothing, AT&T showed a clear interest into entering the French telecommunications market. Later in 1994, AT&T proposed to buy into the loss making computer manufacturer Bull on the condition that it would be granted a telecommunications operating license. The two European operators responded by aligning themselves with Sprint, the third largest American long-distance/international carrier, in the Atlas/Phoenix joint venture, later renamed as Global One.

The Liberalisation of the Equipment Market

While retaining a complete monopoly on the public telecommunications network, the DGT did not have any monopoly on terminal equipment were sold at market conditions (the first telephone was excluded from DGT's monopoly in 1986). From 1974, the French government loosened the terminals market and concentrated its efforts and investments on switching, transmission and network installation, while allowing modems, PABX and customer premises equipment to be sold at market conditions. The government allowed competition among French manufacturers (e.g. Alcatel, SAT, Jeumont Schneider and Thomson) and made it difficult for foreign manufacturers to enter the market through certification procedures from which foreign firms were virtually excluded. Barriers to competition were only slowly and selectively removed, with new entry by foreign suppliers and competition being administered by government authorities. Through its private subsidiary EGT, DGT competed with the equipment suppliers for the delivery of terminals. In the mid-1980s the two most important equipment manufacturer were: Compagnie Générale d'Electricité CGE (CIT-Alcatel) with 84 per cent of the market and CGCT (an ITT

subsidiary) with the remainder of 16 per cent. As part of its overall nationalisation programme of 1982, the French government bought out the remainder of ITT's telecommunications activities, mainly CGCT. In 1982/83, CGE/Alcatel and Thomson swapped their civil telecommunications and computing and defence activities, in the so-called second Yalta of Electronics. It was believed that this would reduce existing competition and generate economies of scale. The Yalta-agreement between Thomson and CGE made CIT-Alcatel the new telecommunications champion and Thomson the national champion in consumer electronics and semiconductors. The DGT was the consolidation because such a bilateral monopoly would diminish its bargaining power. DGT did not wish to be dependent on single sourcing. In its view rivalry between competitive suppliers would benefit technological innovation and cuts prices.

After purchasing 56 per cent of ITT's telecommunications business in 1986, CGE Alcatel gained access to ITT's advanced digital switching technology and was allowed entry into previously closed markets in Western Europe: Belgium, Spain, Italy, the Netherlands and Germany. When the strongly diversified ITT-conglomerate ran into financial trouble in the mid-1980s, threatened by corporate raiders and disappointing commercial and technological results of its telecommunications switch (System 12), it decided to withdraw from the telecommunications race and began to look for a partner. ITT had also suffered from the aftermath of the nationalisation of several of its subsidiaries; in France, for instance, ITT had received only a tenth of its subsidiary's market value when it was deprivatised in 1981/82 ($32m in stead of about $325m)(Araskog 1990: 127). CGE was clearly interested in acquiring a substantial stake in ITT, and herewith increasing its share in the domestic equipment market, and started secret and bilateral negotiations. In the beginning Alcatel (CGE/ITT) was designed to be a pan-European project, with ITT owning 37 % of the shares and a European holding company named Eurotel owning the other 63 %. Originally CGE had intended to include partners from Belgium (Société Générale), Spain (Telefonica), Italy (Italtel) and Germany (Bosch) in the Eurotel-holding. After negotiations with the Italian and German partners collapsed, the Belgian and Spanish partners also decided to abandon the pan-European project. The French government, at that time the sole shareholder of CGE-Alcatel, only became involved in the ultimate settlements of the CGE-ITT venture. Basically the French Government was confronted with a *fait accompli* by its relatively autonomous subsidiary and it had no choice but to agree to the alliance being finalised (Sally 1993; Araskog 1989).

From that moment on, CGE-Alcatel has successfully developed from a French company that was highly dependent upon its protected home market and former French colonial markets to a strong and decentralised Europe-national with world market leadership in the equipment market. This will have consequences for its R&D activities currently carried out in Francel: the company may be forced to aim its R&D strategy to the needs of non-PTOs and non-French customers. Nominally, Alcatel is based in the Netherlands, partly to illustrate the European character of the company and because of the Dutch attractive fiscal climate. In 1990, Alcatel acquired a 65 % stake in the second Italian equipment manufacturer Telettra, a subsidiary of FIAT. Besides getting a market share of 33 per cent in the Italian equipment market

Alcatel gained a minor stake in the FIAT-holding company. Alcatel also acquired 65 per cent in Teeter, the Spanish subsidiary of Telettra, by swapping assets with the Spanish operator Telefonica. In 1991 Alcatel increased its stake in Teeter to 75 % by buying Telephonica 10 % stake in Teeter. Later, Alcatel was forced by the European Commission to sell its 13 per cent stake in Telephonica. In 1992, Alcatel and ITT agreed upon a buy out: the telecommunications manufacturer bought the remaining 30 per cent of the ITT shares. In return ITT acquired a 7 % stake in the CGE-holding company, renamed into Alcatel-Alsthom. In this diversified conglomerate, active in transport, energy and communications equipment, the latter domain contained almost 70 per cent of the holding company's sales (Sally 1993).

In order to reduce its dependence upon the PTTs, Alcatel diversified into new market segments directly or indirectly related to public switching, like datacommunications. In 1993 Alcatel teamed up with the US-based international operator Sprint/Telenet Communications for the development of advanced data networks. In 1993 Alcatel made it clear that it would be prepared to consider taking equity stake in France Télécom (or swap stakes) if the operator were to be privatised and if vertical integration in telecommunications was allowed by the European Commission. The future of France Télécom's second court supplier CGCT was dim and highly uncertain: it relied upon a minor market share of 16 % without having a central office switch of its own and was confronted with operating losses of approximately FFr 1b between 1976 and 1983 (HBS 1988). Between 1982-86 the government considered two options to ensure a continuation of CGCT: the acquisition by a major French company or prolongation with state support. The attempts to integrate CGCT into CGE, Thomson or Bull proved fruitless and consequently the troubled company relied upon large state subsidies for its survival. The sale of CGCT by the government in 1987-88 caused a serious battle between three powerful foreign bidders: AT&T, Ericsson and Siemens. The DGT saw its strong support for the AT&T/Philips lobby, based on superior technology and solid market experience, rejected. The government avoided severe trade confrontations with the Germans and the Americans by awarding CGCT to a Franco-Swedish consortium, in which Matra, Bouygues and Ericsson participated. The government's decision was based on financial and socio-economic arguments (switch price, acquisition price and minimum number of layoffs) and the selection of foreign partners, that would include collaboration with domestic telecommunications businesses and allow for a substantial transfer of technology (HBS 1989).

Confronted with a saturated switching and terminal equipment market both domestically and internationally, Alcatel decided to widen its focus by diversifying into new market segments, like mobile service operations (the acquisition of a 20 per cent stake of the cellular operator SFR/Compagnie Générale des Eaux), multimedia services (Générale Occidentale) and satellite/space manufacturing (the acquisition of Hughes). Given Alcatel's dependence on switching equipment sales to a small number of operators, with profit margins that are narrowing, Alcatel is pursuing alliances with network operators as well as information and entertainment providers to enter into networks services, software and programming. For instance, Alcatel has expressed interest in buying equity holdings in Belgium, Italy and France. It also

made a bid for French PCN-license in 1993/94, that eventually was given to a consortium led by Bouyges, including furthermore Decaux, US West, Cable & Wireless, VEBA, Paribas and BNP. In the Autumn of 1994 Alcatel and Compagnie Générale des Eaux, France second cellular operator, extended their small equity stakes and linked up with each other to move into service provision.

6.7 *The Plans for the Privatisation of DGT/France Télécom*

Until 1988, the Ministry of PTT and Space controlled French postal and telecommunications services through the Direction Générale de la Poste and the Direction Générale de Télécommunications. The DGT, established as a autonomous directorate in 1946, employed about 170,000 people (of whom about 12,000 were working in its subsidiaries) and was composed of 22 regional directorates, which were in turn divided into operational subregions. France Télécom/DGT saw an increase of personnel from 161,000 in 1982 to 166,000 in 1985, followed by a gradual reduction to 152,000 in 1994 (see table 6.2). Another 5,000 staff are working for the various subsidiaries within the larger Cogecom holding.

In 1991, France Télécom was semi-corporatised: it was not yet a fully government-owned company (Société Anonyme) under company law, but it had some commercial autonomy. One of the political constraints imposed upon its business was France Télécom's contribution to the Treasury and its payments to a multitude of industrial policy commitments. In accordance with article 19 of the 1990 Telecommunications Act, France Télécom had to pay a levy to the government, that would be used to finance the state's commitments to national security, innovation and industrial policies. This could vary from subsidising the public R&D laboratories for telecommunications (CNET), and space (CNES), to financing a large percentage of the manufacturer Alcatel's R&D activities (through CNES and CNET), to propping up troubled French companies in strategic industries, like Bull, Thomson and SGS-Thomson. These funds were channelled through Cogecom for non-telecommunications related investments in subsidiaries and via acquiring direct equity in Bull, Thomson, SGS-Thomson (see table 6.1), and the recently privatised insurance companies AGF and UAP (2.2 per cent and 0.6 per cent respectively), the advertising and communication company Havas (5.5 per cent), Banque Hervet (8%) and the COFIRA holding company (8%). Since early 1994, however, the levy contribution to the State's budget was replaced by a normal fiscal regime, making the company subject to the French corporate tax regime and requiring it to pay corporate and any other taxes.

The current strategy of France Télécom is to become a strong overseas competitor, that remains integrated at home in order to provide high quality universal services and is free to distribute video signals and use radio in the local loop (unlike BT in the UK). In order to prepare for international and domestic competition, two burning issues needed to be addressed: the still centralised and functional structure of the organisation (hampering quick and effective decision making and its strategic and operational activities), and the legal status of a state enterprise (not being either a privatised or state-owned limited liability company) handicapping its international acquisitions, alliances and access to financial markets. The first problem was addressed in 1994

when France Télécom announced a year action plan to transform the group's business by focusing on three priority areas, customers, innovation and performance, the second problem is still pending.

In April 1994, France Télécom (1994 Annual Report) renewed its contract with the State (*cahier des charges*). For the period 1995-1998, the following objectives were agreed: tariff rebalancing, the acceleration of debt reduction efforts, and productivity improvements (efficiency). As a consequence of the large investment in the diffusion of Minitel, the subsidisation of ailing firms and high-cost ventures, France Télécom was heavily in debt. In order to free resources for expansion and to relax financial charges, France Télécom started to pursue a policy of debt reduction. The effort to cut back debts paid off when the debt/equity ratio was reduced from 102.9 in 1992 to 70 % in 1994 (France Télécom Annual Report 1994).

One could say that the DGT and the French government brought about a kind of hidden privatisation, by creating various separate subsidiaries and public/private joint ventures (i.e. *filiales*) subject to company law, and therefore not controlled by the Cour des Comptes. Through the pursuit of such a *filialisation* strategy, DGT/France Télécom was able to cope with a more demanding and complex market environment and acquire the flexibility in terms of better access to capital and labour for effective diversification and foreign investment, without being constrained by government prohibitions and parliamentary scrutiny. Constrained by the civil servants statute, budgetary requirements set by the Treasury and operations confined by the French nation state, France Télécom has established a number of subsidiaries or *filiales* that have a certain managerial autonomy and flexibility its marketing, investment and personnel policy. In addition to its core functions of network supply and basic service provision, France Télécom diversified by establishing semi-independent subsidiaries to penetrate emerging product markets, to promote innovation and entrepreneurship, and internationalise its business activities by establishing international joint ventures. This filialisation policy had clear advantages, especially with respect to ownership, authority structures and market strategies (Vedel 1991). Compared with France Télécom that had no legal status and no assets of its own, these special subsidiaries did not belong to the state and were not controlled by the Treasury and the National Audit Office. They had a large degree of corporate autonomy in personnel, financial, market policies, and foreign investments.

Over the years, the following *filiales* were created:

- Transpac, established in 1977, exploiting the public-switched datanetwork;
- Sofrecom, established in 1967, international consultancy and project development;
- EGT Entreprise Générale de Télécommunications, established in 1965, the provision of advanced terminal equipment;
- Télésystèmes, established in 1969, the supply of telematic systems and services;
- FCR France Câbles et Radio: for new services to large users and international telecommunications;

- CAT (Compagnie Auxiliaire de Télécommunications), created in 1973 to provide credits to small and medium-sized businesses and venture capital for France Télécom.

In order to achieve synergy effects and increase coordination, these subsidiaries were regrouped in 1985 and placed under the control of the holding company Compagnie Générale de Communication (Cogecom) (for 99.9 per cent owned by France Télécom). In 1987, a new subsidiary was created, called Télécom Système Mobiles, in charge of providing computer services and software and developing the mobile communications market. In 1988/89 TDF (Télédiffusion de France) was incorporated as a new subsidiary into the Cogecom holding. After 1988 DGT was given more autonomy from the civil service. Its status as a government department was replaced by that of a legal personality as a national public enterprise, owned entirely by the state. Renamed France Télécom in 1991, it expanded internationally by entering new geographical and product markets. The aim for the mid-term became to establish itself as *une administration entreprenante*, complementing its responsibility as a public administration with private enterprise characteristics. In order to facilitate and provide the financial means for its overseas investments, France Télécom established the 99.7 owned subsidiary FTFI. France Télécom started by setting up a global network of more than 17 offices around the world, covering the two Americas, the two Europes and the Far East. France Télécom's subsidiary Transpac intended to assemble its own trans-European infrastructure to compete with major European competitors. In collaboration with London Regional Transport (i.e. the Underground), France Télécom established Transpac Network Services and it acquired the German network provider Info AG. In the outsourcing domain France Télécom/Transpac took over the management of datacommunications of the Swedish government and Olivetti. In 1994, the company created a separate subsidiary for multimedia matters, called France Télécom Multimedia, to respond quickly and effectively to the techno-economic convergence between broadcasting, telecommunications, electronic publishing, computing.

France Télécom attempted to capitalise on its Minitel/Teletel videotex service by exporting it to various European countries and the USA. The designated subsidiary of France Télécom, Intelmatique, was established to commercialise French videotex abroad. Intelmatique has acquired minority participations in the leading Dutch system provider Videotex NL and the US Community Link Minitel Associates (together with US West). However, the successes at home could not be repeated and equalled abroad. Furthermore, the ever-increasing popularity of Internet access services could be a real threat to the domestic and international position of Minitel. France Télécom realised that an upgrade of the Minitel system was needed: new multifunctional terminals with built-in smart cards were developed, a much faster Minitel service was launched (*Teletel Vitese Rapide)* and links with Internet-based computer systems and PC-based on-line services were established. France Télécom has also sought to build up a presence in newly emerging products and geographical markets. It acquired participations in new fast-growing cellular businesses, like Martin Dawes (mobile service provider) and RAM Mobile Data (mobile datanetwork operator). In its activities

in developing countries, emphasis was laid on rolling out fixed and cellular networks in Eastern Europe (Russia, Poland), Latin American (Mexico and Argentina), and South-East Asia (i.e. Vietnam). France Télécom has acquired a 32.5 per cent stake in Telecom de Argentina, a 24.5 % in TelMex (Mexico), a 35 % stake in Greece Mobile Panafon (cellular operator) and a 24.5 stake in Poland with Centertel (cellular operator). In 1994, France Télécom has set up a partnership with the national operator to expand Vietnam's telephone network and to develop a cellular network. Furthermore, France Télécom participates in the internal and European satellite consortia Intelsat and Eutelsat, and was involved in Inmarsat (international matitime services).

France Télécom benefited from economies of scale through its multiple partnerships with *Deutsche Bundepost Telekom* DBP T. These two companies, still benefiting from a near-monopoly in their home markets, but expecting shrinking market shares in the mid-term as a result of further European deregulation and world-wide competition, decided to join forces to become a key player in the global telecommunications market. Besides forming a joint venture that would serve the strategic aim to offer international companies with a full range of voice and data services around the world, the alliance would also give the two companies a lever to negotiate for more corporate and financial flexibility in their home base and allow for a safe privatisation path of cross-sharing equity. As early as 1989, France Télécom and Deutsche Telekom had started to collaborate by setting up Eucom, a venture that would provide value-added networks and one-stop shopping services to business customers; later followed by Eunetcom, that offered corporate network products. In March 1992, France Télécom and DBP Telekom announced that their partnership would go wider when they announced that they would provide joint telecommunications services for international customers through the global managed network service company Eunetcom. The possibility of cross-over equity stakes in the near future, following the privatisation of DBP Telekom and France Télécom was not excluded. The 50/50 Franco-German venture began looking for a potential American partner to facilitate a world-wide provision of telecommunications services for international corporate businesses. The operator MCI, with whom the French and the German PTTs already collaborated in Infonet Services Corp. was intended to join the Eunetcom venture. When MCI signed a far-reaching agreement to collaborate more closely with major European rival British Telecom, Deutsche Bundespost DBP Telekom and France Télécom had to consider alternatives.

In November 1993 DBP Telekom, France Télécom and AT&T drafted a broad memorandum of understanding on merging their European and transatlantic businesses (Communications Week International 11 November 1993). The so-called Project Atlantic would add a European arm to AT&T Worldsource venture to provide global business services (also including KDD/Japan and Singapore Telecom). This agreement was opposed by a group of actors that all had varying reasons to be against that deal: the European Commission, Alcatel, Siemens and BT as spokesmen of the *triumvirate*'s competitors. The European Commission made clear that it would advise against the alliance because this would clearly result in a dominant market position in international telecommunications: it would nip competition in the bud. Alcatel and Siemens felt that their privileged position as respectively France Télécom's and Deutsche Bundespost

Telekom's preferred suppliers of equipment could be threatened by their biggest rival in that market segment, namely the equipment branch of AT&T.

The two European operators decided to tighten their partnerships and one month later in December 1993, France Télécom and DBP announced a strategic alliance in the common provision of data services, managed network services, satellite services, virtual private networks and multimedia. This joint venture, provisionally named Atlas, later renamed as Global One (including US Sprint) would extend the already established Franco-German partnerships of Eucom and Eunetcom by integrating France Télécom's Transpac and DBP's Datex-P datanetworks to provide a trans-european data network. Switched voice telephony would be excluded from this Euro-alliance. Depending on the liberalisation of the European telecommunications market and the privatisation process in France and Germany, the alliance might go even further in the future: there was talk of an equity swap between the two operators and long-term network unification. In the Summer of 1994, France Télécom and Deutsche Telekom announced the $ 4.2b acquisition of a 20 per cent stake in Sprint (the third largest US long distance operator); the new company was provisionally called Phoenix (later renamed as Global One). This link up would substantially expand the geographical coverage of their networks for the provision of global one-stop-shopping telecommunications services. The plans of the French and German operators to collaborate in the Atlas project and their joint venture with US Sprint were not fully supported by the European and American regulatory and anti-trust authorities. These authorities have made their approval contingent on the degree to which the still strongly protected French and German markets would be opened up to competition. Given the closed character of the French and German markets, the two bodies hesitated in giving their authorisation and the parties involved started to negotiate with the European Commission to take away the aura of a non-aggression pact between the two of Europe's largest carriers, operating from a sheltered home base. By persuading their home governments to meet the EU infrastructure and voice liberalisation requirements before 1998, and by excluding some units from the joint venture (e.g. considering the exclusion of each other's datanetwork subsidiaries from the Atlas venture), France Télécom and Deutsche Telekom thought they could solve the regulatory deadlock.

Together with its German partner DBP Telekom, France Télécom still has a substantial stake in Infonet, the global datanetwork provider owned by a number of public network operators. After the link up with BT, one of the shareholders, MCI, divested its interests in Infonet, while France Télécom and DBP increased their combined share to more than 40 per cent. However, the strategic linkage in 1993 of DBP Telekom and France Télécom in Atlas (Eucom/Eunetcom), followed by the joint venture of Atlas and Sprint in Phoenix one year later, might lead to another reorganisation of shareholders in Infonet. France Télécom and DBP Telekom, together with the computing company DEC, have established EURO-LOG, a VANS provider in the transportation industry. The two Atlas partners still have a substantial stake in Infonet, the global datanetwork provider owned by a number of public network operators.

As a consequence of its former leadership in the modernisation of the domestic telematics and electronics industry, France Télécom is still heavily involved in the cross-subsidisation of the loss-making national champions Bull and Thomson, receiving equity shares in these companies in return. In 1994, France Télécom had a 17 per cent stake in Bull, and other minority stakes in Thomson Consumer electronics (about 20 per cent) and in the semi-conductor manufacturer Thomson SA (about 10 %). In 1993, France Télécom entered into an alliance with the SEMA Group, a leading French system integrator. In the same year, the rumours about a strong vertically integrated telecommunications conglomerate in the making became stronger when France Télécom started negotiations with Europe's leading software company Cap Gemini Sogeti CGS and the world leading equipment manufacturer Alcatel to create a French counterpart to AT&T. Besides supplying software and services for France Télécom's systems (e.g. provider of the Minitel software), CGS is also one of the important players on the market for outsourcing information and network services.

Table 6.2 Strategic linkages of France Télécom (Source Annual Reports France Télécom)	Participation (percentage)	Major activity
Bull (France)	17	computer manufacturer
Thomson (France)	19.9	consumer electronics supplier
SGS Thomson (France)	11.1	semiconductors manufacturer
RAM Mobile Data (Europe)	20	mobile data services company (with Bell South)
Keystone (USA)	na	provider of satellite video transmission services
Sema Group (UK/F)	20.3	IT-services company
Global Star (F)	51	global mobile system by satellite (with Alcatel)
Infonet (global)	20	operator of value-added-network services
Panafon (Greece)	35	second cellular operator
Nortel Inversora	16	equipment
TelMex (Mexico)	24.5	national public operator
SKD (Sweden)	75	specialist in network intelligence
Eutelsat (Europe)	14.5	european satellite services organisation
Intelsat (global)	4	international satellite services organisation
Inmarsat (global)	5.3	international maritime services organisation
Community Link Associates USA	na	tele-information services provider
Intelmatique (Europe)	na	promoter of Minitel/videotex abroad
Centertel (Poland)	24.5	cellular service provider
Eucom (Europe)	50	pan-European service provider
General Magic (global)	na	multimedia products and applications
FT1CI (France)	50	holding with CE Industrie (manufacturing)
Telecom de Argentina	32.5	national public operator

na = not available

Source: France Télécom Annual Reports (1990-1994)

The company has started to increase customer responsiveness and moved closer to the market and the different customer groups. For that purpose, it has decentralised its activities through specialised account managers for large corporate accounts and multi-site companies, smaller businesses and professionals, and residential customers. From 1990 onwards, France Télécom targeted business customers as a group and established a special division to serve its largest 300 customers (*Services Grandes Comptes)*, like Societé Generale, Rhone-Poulenc, Eurodisney and Elf-Acquitaine. France Télécom is taking a leading position in the promotion and diffusion of ISDN: it was the first to launch ISDN commercially (in 1988) and had established a full national coverage by 1992. France Télécom pursued a collaborative strategy by offering ISDN services in close collaboration with large user groups: for instance, business customers could enter into 'partnership arrangements' whereby France Télécom would cover up to 50 per cent of the developments costs of applications and up to 20 per cent of user-specific developments costs (Ergas 1992: 15).

The precise legal status of DGT/France Télécom has been unclear since the early 1980s (Bonnetblanc 1985). The (semi-)corporatisation of France Télécom limited the state's abilities to interfere in day-to-day management and in stipulating grand projects. After the 1990 modification of its statute, France Télécom's has followed a collaborative strategy and established several links with domestic businesses and partners from abroad (e.g. DBP Telekom). This international and sectoral networking strategy of France Télécom to some extent has replaced the government's political hold on the company by 'peer group control' based on technical or commercial criteria. the government's control would erode even further with the final privatisation of France Télécom (through a public floatation or asset swap).

Table 6.2 Key Data France Télécom[6]	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94
Turnover before tax (in billion FFr)	na	na	na	na	na	na	na	na	na	108.4	115.8	122.6	127.0	142.6
Profit before tax (in billion FFr)	0.3	0.3	0.7	0.9	1.1	1.1	1.2	1.2	2.4	2.6	2.0	3.3	4.8 (9.1)*	9.9*
Workforce (x 1000)	156.5	161.3	162.5	164.6	166.2	165.0	161.4	158.6	156.5	156.6	156.1	156.9	154.5	167.9+

na: not available Source: DGT/France Télécom Annual Reports 1981-1994

* = new fiscal and acoounting regime from 1 January 1994.

+ = this figure includes the average number of employees in the France Télécom Group (i.e. the core company and its holding and semi-independent subsidiaries).

6 The financial results of France Télécom, as offered in its Annual Reports, are difficult to interpret, given the use of different bookkeeping procedures, the various changes in the fiscal regime France Télécom was subject to over the years, and the far from transparent ownership and control structure of France Télécom and the Cogecom holding. The lack of clear information about France Télécom financial and economic situation makes it extremely difficult to compare the company with other PTOs.

To some extent, CGE/Alcatel followed a similar path in its corporate evolution towards horizontal integration and internationalisation, as the one taken by DGT/France Télécom did. The corporate growth of CGE/Alcatel was both positively and negatively influenced by the French government: it was deliberately sponsored and shaped y the French state to become the national telecommunications champion, and it was nationalised and denationalised within a time frame of five years. As one of the market leaders in the world equipment market, CGE/Alcatel was simply too big to be controlled by the French authorities or to be used as an instrument in one of its industrial projects. The late involvement of the state in the ITT-CGE negotiations, when the deal was already bilaterally settled, was a demonstration of its restricted powers. Both an independently behaving CGE and the requirement for European/American partnerships in modern telecommunications, clearly exceeding the home market, went beyond the control of the French government.

World-wide deregulation and the increasing importance of EC-wide regulation of public utilities were another blow to the French government's involvement in telecommunication, challenging their s traditional planning tools (e.g. public procurement, subsidies, debt financing, domestic protection). However, the formal controls of the French government on its two domestic telecommunications flagships may have decreased over the last five years, but through informal links and a collusive strategy France Télécom and Alcatel still seek some form of protection in the home market and a quasi-vertical integration between equipment technology and network provision to launch advanced communications facilities on the world market. The recent policy of France Télécom to cut back its debts substantially has had a negative impact on its relationship with Alcatel, effectively leading to tougher negotiations, more competitive tendering, and a postponement or cancellation of investments. This short-term reorientation and 'more value for money' approach by France Télécom has caused a sharp fall in profits in 1994. In order to reduce its critical dependence on equipment manufacturing, Alcatel decided to spread its risks by gradually moving into service provision and network operation. After losing out in its bid for the GSM license, Alcatel acquired a 20 per cent stake in the winning Bouygues consortium, and the company has a substantial stake in General Occidentale (cable tv, publishing).

6.8 *Regulatory Reform of French Telecommunications Policy*

In 1982, a regulatory body, the *Haute Autorité de la Communication Audiovisuelle* HACA was set up to monitor public broadcasting, to license local and regional radio and TV stations, and to protect broadcasters from external pressure from the government, politicians and industry. The HACA-body sought to establish itself as the guarantor of independent public broadcasting without direct state interference. With the shift in government from left-wing to right-wing (co-habitating with the Mitterand Presidency) in 1986, HACA, closely associated with the outgoing socialist government, was replaced by an independent regulatory authority, *Commission Nationale de la Communication et des Libertés (*CNCL), intended to supervise both broadcasting and telecommunications. Initially, CNCL had only regulatory powers over the media sector, but then it took over the administrative responsibilities of the

broadcast transmitter TDF, when that company was incorporated in the Cogecom/France Télécom holding. In addition to its licensing and supervisory tasks in the broadcasting domain, CNCL was put in charge of licensing the so-called first category of telecommunications networks (i.e. dedicated wired and radio infrastructures). With the abolition of the monopoly on local cable infrastructures, as a consequence of the adoption of the 1986 Communication Act, the authorisation to operate cable networks was delegated to the CNCL; however, the use of local cable systems is strictly limited to one-way audio-visual services. With the return to power of the Socialists in 1988, the 'politicised' CNCL was replaced by the *Consul Superior de l'Audiovisuel* (CSA). This new administrative body would be in charge of authorising licenses to non-public telecommunications systems, like private networks, cellular telephony, on-the-air diffusion and satellite communications. Notwithstanding another change in government to the Right, the remaining political sensitivity of broadcasting policy, and ongoing techno-economic developments in the field, this independent broadcasting authority managed to survive until today (Chamoux 1993).

In 1986, a Task Force was set up within the Ministry for Post and Telecommunications, named the *Mission à la Réglementation*, chaired by M. Chamoux, to draft postal and telecommunications legislation and develop an administrative structure in which the regulation and operation of postal and telecommunications services would be separated. In the Draft Bill of 1987 the *Mission à la Réglementation* (1988) defined basic services as the transmission of signals that were not processed, including telephony, telex, switched datatransmission and leased circuits. Concerning network provision two separate categories were proposed: a public network that would meet socio-political obligations and alternative private networks that were supposed to compete with and complement the core network (e.g. in the cellular domain). The control of the public network and the provision of basic services would remain the exclusive responsibility of the DGT, that was also allowed to offer alternative complementary networks. The issues of interconnection and the definition of network interfaces would be defined by the Ministry to ensure the public network's integrity. The Mission suggested relocating DGT's administrative activities to the Regulatory Task Force and to the independent newly established High Authority for the Audio-visual Sector CNCL. The first would be responsible for regulating of the public network, while the second would regulate the private networks and be responsible for frequency allocation. The Mission furthermore drew attention to the fact that French telecommunications policy was relatively in line with the outlines of the Green Paper: the terminal equipment market was already open to competition and the separation of the regulatory and operational functions would be implemented at short notice. The Mission also raised doubts about whether the 'unity within the PTT House' should be maintained: the presumed synergies between the postal and telecommunications functions could be questioned and the sole reason to keep PTT integrated PTT was to be found in the history and the civil servants' statute of the administration. In the same period the government also reduced the direct involvement of the DGT in industrial policy by transferring the ultimate responsibility to the Ministry of Industry. The institutional

landscape changed once more when the Regulatory Taskforce became established as a separate department within the Ministry of Post, Telecommunications and Space.

After the legislative reform of 1990/91, the administrative responsibilities of the CSA in the telecommunications domain were transferred to the P&T Ministry. In 1988 the regulatory and operational functions of the DGT were officially split: France Télécom, the new name for the DGT, was freed from its administrative tasks and the Directorate General of Regulation DRG, would handle regulations that would enable modest competition between the DGT and private companies. The DRG, drawing some of its staff from the DGT, would have authority over type approval, value-added-services and the electromagnetic spectrum; it would also represent France in international negotiations. The prices concerning services for which France Télécom had exclusive rights or for which no competitor has received authorisation, were submitted to approval by the Minister in charge of telecommunications and the Minister responsible for the economy. A price cap system has been set for France Télécom within the scope of the contract of the plan between the state and the operator (*cahiers des charges)*. The price cap system operating in France consists of a formula is lightly different from the one used in the UK: a RPI-3% for 3 years. A beginning was made with the separation of regulatory and operational activities and the bringing in line of telecommunications legislation with the EC Green Paper. M. Roulet, the Director of DGT, recommended ending the dual role of network operations and administrative activities, and establish DGT as a state enterprise rather than a government administration, able to participate in joint ventures with private companies and to purchase its equipment more freely. The Direction de Service Publique DSP is responsible for overseeing France Télécom's investments, debts, personnel policy and tariffs. Under the Balladur Government in 1993/1994, the administrative structure of DRG, DSP and the larger Ministry of Industry and Post and Telecommunications was transferred to a new Direction Generale des Postes et Telecommunications DGPT, which belonged to a larger Ministry of Information Technologies and Post.

In the new regulatory framework of 1990, France Télécom became a public body under the guidance of the PTT Ministry entrusted with commercial, industrial-economic and social goals. The company carried out its activities according to a planning contract (*cahier des charges*), stipulated by the Minister in charge, in which the license obligations of FT were stipulated. For instance, France Télécom was pressed by the government to balance a number of policy objectives:

- adopting a more decentralised structure and becoming more customer oriented;
- rebalancing its tariffs
- guaranteeing job stability for its employees
- investing in international ventures and new technologies (France Télécom Annual Report 1990-1991).

France Télécom's financial autonomy is still severely constrained by the Treasury: it still has an *ad hoc* and unique status, and is not yet fully subject to private business laws. In order to prepare itself for both domestic and international competition France Télécom made a beginning with tariff reform in 1992. Given the already strong competition at the international level and the emerging challenge from cellular operators and possible cable operators and other fixed operators in the future, France Télécom, like any other public telecommunications operator expecting or confronted by new entry and rivalry, decided to rebalance the charges for local, long distance and international services. The company began by cutting international telephone rates with more than 20 per cent between 1992-1994 and, under pressure from large users, service providers and the regulator DRG, also cut its prices for long-distance leased lines. Early 1994, although residential customers were compensated for the fact that the local zones were enlarged and benefited from cheaper long distance call services, local calling tariffs went up by 100 % and monthly subscription rose with more than 30 %. In October 1994, the DGPT had to solve the dispute between SFR, the new entrant providing competitive cellular services, and France Télécom, on interconnection charges and the abuse of market power. SFR complained about the extra-ordinary prices and interconnect fees it had to pay to France Télécom. The company argued that because of these high charges, it was unable to compete effectively with France Télécom. Minister Longuet and his DGPT directorate, aware of the dependency of SFR on the fixed infrastructure of the incumbent, put France Télécom under pressure to cut its network interconnect fees by 50 per cent.

After the strikes and political turmoil over the 'hot potatoes' of 'privatising France Télécom' and 'liberalising the public telecommunications service in 1993/1994, the Minister responsible for PTT matters, M. Longuet, came up with the idea to set up discussion platforms for the exchange of information and views, in a bid to find support for structural change. Also confronted with the requirement of bringing French legislation in line with the liberalisation directives of the Commission by 1998, the Minister asked M. Lasserre, head of the Regulatory Unit DRG of the Post and Telecommunications Department, to organise a 'public consultation' of all the public and private stakeholders about the future organisation of French telecommunications industry (DGPT 1994b). When the direct way to propose and implement legislation was not available due to strong opposition from the major operator's workforce, and to some extent supported by factions in the government and parliament, that would forge a consensus on particular controversial issues before any crucial political decisions could be taken. At the closing date of this study (end of 1994), the DGPT had collected evidence and the various viewpoints from all the parties concerned and had started to draw up (more modest) legislative proposals to prepare the incumbent operator and others for competition at home and abroad, and to set up an appropriate regulatory structure.

The notions of infrastructure competition and opening up voice telephony by 1998, as required by the Commission, were supported whole-heartedly by the incumbent, the user community and potential new fixed infrastructure providers. Unlike BT's ban on entry into cable market, interactive entertainment services and hybrid cellular/fixed systems, France Télécom was allowed to set up and participate in

various multi-media testbeds, cable telephone, interactive television, pay-per-view broadcasting, and wireless in the local loop (all related to the Government's information superhighways initiative). The corporate large users were pleased with the overall effects of introducing competition, spurring innovation, choice, quality and price cuts, but also with the permission given to large companies to set up closed user groups and provisions for information sharing (Cohen 1992). New operators, such as the SNCF (the railways company), highway companies, utilities, and new foreign entrants (e.g. BT, AT&T/Unisource) were offered the possibility to sell capacity to third parties, while CATV operators and Alcatel were now allowed to become (multi-)service providers. In setting up an appropriate institutional framework to facilitate fair competition in French telecommunications beyond 1998, policy makers and regulators also had to accommodate the interests of other stakeholders. A large majority of France Télécom's workforce insisted on retaining the civil servant's statute, and demanded that some of the public operator's privileges (e.g. universal service provision, and its commitment to national security and industrial policy)be maintained in the future organisation of the industry.

6.9 *Summary and Concluding Remarks*

France has a strong interventionist tradition, in which the national government, together with state-owned and state-controlled institutions (nationalised enterprises and investment banks), often imposed policy changes in the face of opposition from organised private interests. The government often took a mercantilist stance by actively supporting its domestic industries, protecting them from fierce international competition by large state subsidies, and various tariff and quota measures. The overall aim of government policy in France was to avoid the duplication of efforts and funds and to produce economies of scale that would improve the competitive prospects of leading French companies. Active state involvement in the strategic industries was justified because rationalisation and modernisation were required in order to make these companies (or industries) more efficient and commercially oriented. Large horizontally and vertically integrated industrial groups were created, that encompassed more than one industry: for example Alcatel-Alsthom (transport, power and communications) and France Télécom (telecommunications, information industry, cable and entertainment). In the 1980s, French industry has effectively expanded its base through mergers and acquisitions abroad. Clear priority is given to the emerging Internal European Market, shunning head-on competition in the two other big regional markets in the Global Triad, the USA and Japan. So far it looks like the European Community has been used as a springboard for global markets. The French government has convincingly stuck to the traditional state monopoly model by maintaining public control over the operator, the infrastructure and basic voice and data services. For instance, the high-performance ISDN was strongly promoted by DGT/France Télécom and was scheduled to meet public service goals and introduced on a nation-wide basis. The fringe markets of value-added services and peripheral equipment, however, were liberalised.

The French have given clear priority in their industrial strategies to strengthen their manufacturing base and core sectors (high tech industries, like aerospace, information technology) to ensuring that domestic firms are able to achieve world leadership in those key markets. The policy instruments used to accomplish these objectives have been state planning in the formulation of targets, credit provision and an active and dirigiste role of the government in interorganisational and sectoral restructuring. The major reason for the state's involvement in the telecommunications domain in the early 1970s was the poor performance of the domestic telephone network with low density rates and low quality levels. The government delegated this priority programme for the modernisation of the domestic telecommunications industry to the DGT/PTT and to the Corps of telecommunications engineers. The DGT was given a high level of autonomy and political responsibility to develop and expand new services and equipment. The modernisation of the public network provided the French national champions of the manufacturing industry with massive R&D subsidies and guaranteed market shares. An illustration of the French government's pursuit of national autonomy in critical sectors can be found in the telecommunications manufacturing industry. From being dominated by foreign firms (ITT and Ericsson), the state managed to restructure the manufacturing industry and create the CGE-subsidiary Alcatel as a clear national champion. In this process of *francisation* of the French telecommunications industry (Aurelle 1986: 59) the position of the DGT/PTT was ambiguous: on the one hand the DGT, as part to the state apparatus, followed the overall industrial strategy of the French government of controlling all the components of the domestic telecommunications industry, while on the other hand it favoured competition between the incumbent manufacturer and new entrants to reduce its techno-economic dependence on one supplier.

The French emphasis on the manufacturing aspects of telecommunications has led in some respect to a neglect of the service element. DGT has emphasised the introduction of new services and facilities to the low-growth consumer market, giving less priority to the more sophisticated demands of corporate businesses and foreign multinationals, that would generate high-growth margins for DGT. The Minitel/Télétel project was part of a well-coordinated industrial strategy, that integrated typical French elements like: large-scale and high tech infrastructure provision by the state, the promotion of the interests of the DGT and the French telecommunications equipment industry by facilitating a mass market at home and exports abroad and overall informatisation policy of the French government. The French state also continued to promote the international competitiveness of the domestic equipment industry by supporting the ITT/LCT and CGCT take-over by respectively CGE-Alcatel and Matra/Ericsson. Besides the relative success of the large-scale introduction of Minitel, the state-led strategy was not always effective. For example the *Télécopieur Grand Public* (i.e. facsimile) was unsuccessfully aimed at the consumer market, and it was only later that the service was introduced on the professional business market. The Plan Cable did not really take off before 1990, when a number of administrative hindrances had been removed. Furthermore, as a result of the ambitious Minitel distribution policy and the cross-subsidisation

arrangements between the profitable DGT/France Télécom and the ailing firms Bull and Thomson, the public operator is still heavily in debt.

The results of the French state-led approach of industrial adjustment are mixed. State intervention was successful in the development of one of the most modern infrastructures in the world (in terms of 95-100 per cent digitisation of transmission and switching) and the society-wide expansion of new services (e.g. approximately 7 million videotex terminals installed, and one million ISDN channels)(France Télécom Annual Report 1994). Another success was the *francisation* and consolidation of the fragmented domestic telecommunications equipment industry into the national champion Alcatel. The French interventionist approach proved limited and deficient as well: it has been less successful in the domains of cable television, mobile telecommunications and global service provision. Telecommunications in France has been faced by increasing state intervention in the areas of telecommunications and informatics: the French PTT and the state-controlled Cogecom-holding have been given far-reaching responsibilities in the reorganisation of these sectors. France Télécom's public monopoly has expanded beyond the infrastructure and voice telephony to include large parts of the markets for value-added services and datacommunications. In terms of organisational manoeuvrability and flexible service provision, France Télécom has been, however, constrained by the civil servants' statute and restrictions upon financial borrowing. To overcome these limitations set by the public administration, the central government in 1978 established Cogecom as a holding company, allowed to establish subsidiaries under private law. A network of affiliated commercial companies was created in the fields of audio-visual communications, business communications, telematic services and IT-industries. Coordination between the core company and its affiliated subsidiaries can be poor, as the rivalry between France Télécom and TDF has shown.

The problems normally associated with state monopolies, poor innovation record, low productivity and inflexible bureaucracy, do not apply to the French situation. Although France Télécom may be hierarchical and lacking internal transparency, this case study has shown that the vertically and horizontally integrated structure of the French telecommunications system, including network operations, manufacturing and R&D, was effective in catching technically and economically with world market leaders. Looking at its successes and failures, the French system of state entrepreneurship might not been very efficient, it was surely effective in modernising the domestic industry from the 1970s onwards. Controversy remains, however, over the questions whether or not corporatising/privatising France Télécom and when and how opening up the provision of basic communications services to competition.

7

A Comparative Institutional Analysis of British, Dutch and French Telecommunications Policy (1980-1994)

7.1 *Introduction*

The majority of European states is preparing their telecommunications sector for international competition by transferring their PTT administration to the private sector and changing its structure from a machine bureaucracy to a (more) profit-driven and flexible form. The administrations have adopted an enterprise culture, characterised by a bigger customer responsiveness, and have commenced an active search for innovative services, profitable market segments and scale & scope economies. The bigger telecommunications companies have embarked upon a strategy of horizontal and vertical integration aimed at securing their home markets and at the same time penetrating new geographical, product or customer markets. European telecommunications operators have diversified into manufacturing, information services, cable and broadcasting, and they have penetrated the underdeveloped Latin American and Central European markets and established new Euro-national companies through mergers and acquisitions. There is also an emergence of global carriers providing world-wide one-stop services to large business customers: BT has teamed up with MCI (USA), herewith establishing Concert; France Télécom with Deutsche Bundespost Telekom and Sprint (USA), establishing Atlas/Phoenix (renamed as Global One in 1996); and PTT Telecom (the Netherlands) with the Swiss, Swedish and Spanish PTOs in Unisource and participating in Worldsource (together with AT&T, KDD Japan, and Telecom Singapore). At the same time, the former PTTs were confronted with competition from computing firms (IBM, DEC), service providers (EDS) and new network operators (cellular radio, cable), that have entered the telecommunications market.

In 1981, the starting point of this research, a common regulatory regime existed in Western European telecommunications, that had been dominant and valid for almost a century. The traditional telecommunications policy community integrated the main stakeholders of the industry: the PTT administration as monopolistic provider of postal and telecommunications services, the domestic equipment industry as PTT's preferred supplier, the national government, labour unions and (residential) consumers. This encompassing PTT or public monopoly system was a 'burden sharing network' based on the cross-subsidisation between the various PTT services and collaboration among its major stakeholders in realising the gradual expansion of

the telephone network and towards universal coverage. Originally, the telecommunications industry was organised through a horizontally and quasi-vertically integrated monopoly, controlled and sanctioned by the national government. This hierarchical governance regime in European telecommunications, based upon government intervention, was justified by the state's special and privileged role in the universal provision of public services and its control of the key industries of the national economy. The telecommunications service was operated exclusively by a civil service department, the PTT administration. The profitable telecommunications branch of PTT financed the losses of the postal (and money) services and local telephone services were subsidised by long distance and international telecommunications.

The PTT administration was an integral part of the civil service in charge of at least four basic political-economic tasks: the public utility function serving socio-economic objectives such as universal services and equal access; the commercial function of a leading enterprise innovating and marketing of new technologies and services; the regulatory function allotting frequencies and supervising the industry; and the policy-supportive function of drafting legislation. In some cases the PTT was used by the government to accomplish other governmental functions as well, such as regional policy, industrial policy, social policy etc. The relationship between the PTTs and their equipment manufacturers could be characterised by a monopsony (or sometimes even a bilateral monopoly). The national champions of the electronics industry were the exclusive providers of switching and terminal equipment for the PTTs. Protected from foreign entry, the PTTs and their preferred suppliers actively collaborated in common R&D projects, the setting of standards and the joint production of switching and exchange systems. Organised labour in the PTT administration and the electronics industry also participated in the distributional coalition of traditional telecommunications. The highly organised workforce and its labour unions had established a stable and cooperative industrial relations system, that was based on job security (civil servants statute), relatively high wages in the lower and middle echelons, low levels of industrial and technological change, and slow market protection. The residential) consumers had a clear interest in the expansion of the telephone service as a universal public service provided at a uniform price.

By 1980, the beginning of our comparative study, the political climate in Western Europe had become more susceptible to liberal-conservative ideas. From the late seventies onwards, the various governments began to reconsider their interventionist roles in social, industrial and macro-economic policies. Increasing concerns in government policy about the trimming of public expenditures and balancing the budget, together with the proposals for deregulation and privatisation, illustrate that the European states redefined their role in the national economy in a more restricted way (with the exception of France). The plans of the PTTs to modernise the public telecommunications network to provide new services and facilities ran counter to the prevailing austerity policies at that time. Governments started to consider alternatives to upgrade and innovate domestic telecommunications, like private sector investment, de-regulation, limited liberalisation and putting the PTTs at arm's length.

Ongoing technological revolution, market developments (globalisation of markets and differentiation of demand), European integration and international deregulation challenged the public monopoly and nationalised state enterprise structures of West European telecommunications even further.

While discussing issues like international connection charges, traffic by pass (re-routing) and the emergence of global carriers exclusively serving multinational customers, policy makers started to realise, that the public telecommunications monopoly was no longer sacrosanct. it became clear that the integration of the roles of player, coach and referee in the state-controlled PTT administration was no longer efficient nor effective. As a consequence, European governments pursued a 'less state more market' strategy by implementing liberalisation, deregulation and privatisation measures.

The traditional interventionist governance regime in telecommunications was regarded as ill-suited to promote flexibility, customer responsiveness, innovation and competition. The vested interests of the stakeholders in the established institutional framework were effectively challenged by the entry of new players such as the deregulated American telecommunications industry (i.e. AT&T, MCI, Sprint and the RBOCs), the computing industry (IBM) and the services industry (large users). These developments highlighted the inefficiency of the European public monopoly system, the inadequacy of PTT to meet low cost high quality services and the *illegitimacy* of burden sharing and cross subsidisation. The computing industry slowly increased its domain from hardware, software and office automation to include ever expanding dataprocessing services, that required telecommunications facilities like datanetworks, leased lines and satellites. For the PTTs, the informatisation industry was a leading edge customer dependent upon the public networks, and a (potential) competitor that could build up private networks for datatransmission and thus bypass the PTT-infrastructure. The business community demanded low-cost, high-quality, specialised and fast communication services (Pretty Amazing New Services PANS), all of which could not be provided directly by the PTTs that were specialised in the universal coverage of Plain Old Telephone Services (POTS). These stakeholders in the PTT-system, whose stakes were not recognised, made clear that competition both in the home market and at the international level was inevitable. They promoted market entry for new operators, a more flexible and modular network and new rules of the policy game.

A consequence of this process of strategic interaction between the incumbent and the representatives of the user communities ('the outsiders') was that the established iron triangle had to accommodate the demands of the new entrants and reconsider and adjust its traditional policies. This implied a paradigm shift from the traditional governance structure, made up of a myriad of interventionist, corporatist and clientelist elements, to a more open market-related regime, characterised by a tendency towards commercialisation, internationalisation of markets, and a transformation of the institutional framework. The aforementioned responsibilities of the PTT administrations (public utility, commercial, regulatory and policy-supportive functions) were gradually disentangled and the PTTs were transformed into state-

owned business with a legal corporate status (corporatisation) or even privatised. The operational and regulatory functions of the PTTs were separated: the task of operating the national telecommunications infrastructure and the basic services remained in the hands of the PTTs and the task of regulating and monitoring the national telecommunications industry was attributed to the government ministry or to an independent regulatory agency.

The public monopoly regime, with its high level of government discretion and socio-cultural objectives, was replaced by a pluralist market-governed regime, wherein economic and corporate objectives prevailed. The techno-global forces and the process of European integration fostered the emergence of new institutional patterns in Western Europe, characterised by the *liberalisation* of the telecommunications market, the (pseudo-)*privatisation* of Public Telecommunications Operator PTO and *the regulatory reform* of government intervention to ensure quality of service conditions and fair competition. The monopolistic telecommunications market was gradually opened up to limited competition by a relaxation of entry conditions and the establishment of effective competition. The internal organisation of the PTT administrations was restructured in order to respond effectively to professional demand and to differentiate services and facilities more effectively to cater to the needs of particular customers and market segments. The liberalisation of significant parts of the telecommunications markets and the reduction of government intervention has only partially contributed to fair competition in the domestic market place. The curtailing of the public monopoly, (pseudo-)privatisation and liberalisation clearly implied less government interference in telecommunications in general. New regulatory frameworks were developed in France, the United Kingdom and the Netherlands to promote market entry as well as combat the inefficiency and ineffectiveness of traditional government intervention.

7.2 *Institutional Analysis of UK Telecommunications*

The liberalisation and privatisation debate in British telecommunications presents a mixed picture of gradual change, with two policy breakthroughs between 1979-84 (privatisation, liberalisation) and 1991-92 (abolition of the duopoly). The installation and the consequent reform of the UK regulatory regime followed the measures to give PO/BT more autonomy from the government already put forward in the 1960s and 1970s. The restructuring of UK telecommunications had a strong ideological and normative basis, expressed by the notions of monetarism, popular capitalism and a free market philosophy. These neo-liberal ideas of the successive Tory Governments, elaborating upon the work of Hayek, Littlechild and Friedman, were promoted by 'Thatcher's people' (Keith Joseph, Alan Walters and Alfred Sherman) and *Thatcherite* think tanks like the CPS Centre for Policy Studies and IEA Institute of Economic Affairs (Ranelagh 1991). In the 1980s the Conservative Governments have clearly emphasised and supported the service industries (the City, business services) at the expense of equipment manufacturing. It was argued that a reformed and privatised telecommunications industry would boost efficiency and increase consumer choice with competitive prices and higher quality of service and reduce public expenditures.

As a consequence of these liberal policies, the UK economy also benefited from major inward investments in telecommunications. Many large companies have relocated their European corporate headquarters and telecommunications departments in Britain to make the best use of high quality-low cost services available.

The main government objective in recent telecommunications policy has been to turn the large-size privatisation of BT into a political -and to a lesser extent commercial- success (Hurst 1992). Regarding the issue of liberalisation, the various Conservative governments have played lip service to liberalisation and increasing customer choice. The measures, scheduled to encourage competition, were only gradually implemented. A floated BT would be removed from public sector borrowing requirements and no longer be dependent on the Government for its investments, but it had to rely on the private capital market for financing the modernisation of its network. Besides being the overall regulator of the telecommunications market, the Government also became a large (and special) shareholder of a very profitable privatised company. As pointed out by BT Group Director Argent (1992), the Government would receive more from a privatised than from a publicly owned BT: a listed BT would produce extra windfall profits and generate additional annual revenues for the Treasury through taxation, loan interests and dividend yields. The subsequent transformation of BT's status has made it subject to market forces, the judgement of shareholders, the demands of customers and regulatory oversight. An additional objective for the Government was that a floatation would widen share ownership. This has also happened -although to a more moderate extent than originally expected- with 2.4 million shareholders in 1984 after the first floatation, falling to 1.1 million in 1991 and going up with the second floatation in 1991 increasing to 2.7 million shareholders (BT Annual Report 1991). A hidden objective of the Tory's privatisation programme was that the (potential) windfall profits would allow for pre-election tax cuts and thus enhance the chances of a re-election and weaken the position of its political enemies. The alternative of privatising more gradually by releasing only a modest share of the equity to be sold (10 to 30 %) was never considered. Another crucial group of actors in favour of privatisation and liberalisation were the senior managers and chief executives of BT, who saw their salaries increase dramatically.

The development of regulation and the proliferation of new administrative bodies in the UK has evolved in a piecemeal fashion without being governed by a single set of clearly defined objectives (Gist 1990; Veljanovski 1987, 1991). Instead of emulating American-style rate-of-return regulation, the UK Government opted for a system of price-controls gradually extending OFTEL's role by including the promotion of effective competition and universal service obligations as policy objectives to be pursued. The US regulatory system is characterised by a burden of regulations at both the federal level of the FCC and the state level of the PUCs and detailed accounting rules for calculating profits and setting charges for the regulated companies. The UK system of controlling prices for a basket of services (RPI minus X-regulation) is surely less bureaucratic and less interventionist in that it stimulates the regulated company to search for improved efficiency, labour productivity and

more balanced and flexible tariffs (Beesley & Littechild 1991). As Heald (1988) has pointed out, RPI-X regulation has two disadvantages: the arbitrariness of setting the regulated prices below the retail price index ('X') and defining which services are to be included; and the ambiguous effects on competition (e.g. the risk of predatory pricing), investment levels and service quality. Rather than changing its cost conditions, BT altered its price structure to meet competitive pressures and benefited from the space RPI-regulation offers for cross-subsidising its regulated and non-regulated activities.

UK regulation, however, is still not fully established and complaints still exist, for instance about the absence of genuine competition; information asymmetry between the regulator and the regulated industry; the lack of adequate controls, checks and balances; abundant profits and ruthless efficiency drives with numerous redundancies. Veljanovski (1991) has identified three drawbacks of UK-style regulation: weak accountability to Parliament, weak judicial review by the courts and absence of procedural safeguards and sanctioning possibilities. The NCU (1992b) has proposed making OFTEL's decision-making procedures more transparent and making regulation more accountable to Parliament by establishing an appropriate Parliamentary Select Committee on Public Utility Regulation. OFTEL's formal powers are comparatively weak: when license conditions are breached and agreement cannot be reached with the licensee, it has to rely on the MMC for legal enforcement, as the main regulatory body in charge of competition policy, and the Department of Trade and Industry DTI, in charge of issuing and revoking licenses. Although industry-specific regulatory agencies might lack sanctioning instruments, they have nevertheless informal powers that they can exercise through a process of bilateral consultation and closed negotiations with the privatised company, without public hearings and court appeals (Graham & Prosser 1991). As the former Director General Wigglesworth (1989) has argued, the threat of a reference to the MMC by OFTEL has proved an important pressure instrument in support of reaching informal agreement with the regulated companies and avoiding formal regulatory intervention.

Officially, the British government has regarded its telecommunications strategy as a clear demonstration of the benefits of competition and private enterprise, actively promotes the international competitiveness of its businesses in this high-technology sector. According to the DTI (1990), this market-driven policy has provided domestic consumers with the widest possible choice of high-quality and low-cost services and has furthermore effectively contributed to the leading role the UK plays in the world telecommunications market. In contrast with the official version of public policy, Ellison (1990: 24) made it clear that the introduction *'of competition in telecommunications has been shown to work but has not been an overwhelming success'*. In the relatively open markets, like terminal equipment, value-added services and mobile communications, competition has been established at the expense of BT's dominant position. In the so-called 'administered' markets, however, the increase in competition has only been modest, with BT still enjoying a virtual monopoly. For example, between 1981-91 the government refused to license more than two public networks, resale was prohibited, and the incumbent BT was only subject to a light regulatory regime. The alternative of promoting competition by

divesting BT's internal (local and trunk) and external (international) services, was easily brushed aside when the government needed support from BT Management and the City-institutions to reduce the commercial and political risks, associated with the large-scale and risky floatation of BT on the Stock Market.

The slow decision making process with regards to the enlargement of Mercury's portfolio of activities also that the Government's policy of *David and Goliath-style competition* (OECD 1990: 15) was directed at promoting the rivalry between the two operators only gradually to avoid major market disruptions. The implementation of the duopoly gave BT sufficient time to adjust itself to the liberalised market conditions and allowed Mercury to become established in the market. In the post-duopoly setting CATV companies were given the exclusive right for a fixed period to exploit the economies of scope resulting from the integration of broadcasting and telephony services. This is to give the 'infant' CATV companies sufficient time to establish themselves in this converging market. In its telecommunications policy, the British government was more attracted by the prospect of a privatised company like BT with a *de facto* monopolistic power and only minor regulatory oversight, than the goal of promote competition. Only after several years was Mercury given full interconnectivity to BT's network and was allowed to provide international communications services and public pay phones. Mercury (1993) stated that the powers of the relevant authorities to investigate anti-competitive behaviour and the abuse of a dominant market position, were inadequate. It strongly recommended revising the UK framework for competition law by amending the Competition Act and bringing it in line with EEC-legislation. Mercury suggested to narrow OFTEL's authority for enforcing license conditions and protecting consumer rights and expanding the responsibilities of the Office of Fair Trading or establishing a new competition authority.

The process of telecommunications reform in the UK could be regarded as improvised and business-oriented with a short-term focus. The 1982 White Paper, outlining the controversial plan to liberalise and privatise British Telecommunications, contained only a brief ministerial statement of about 5 pages and some background information about these decisions. The new regulatory regime was to a large extent developed step-by-step and on an *ad hoc* basis. The creation of OFTEL did not appear in the original 1981-plan and was only considered more than a year later when the transition from a monopoly to a market environment was not taking place automatically and needed to be administered by an independent regulatory agency (Pitt 1990). The original decision to design the regulatory structure through the Director-General as a single government appointee with wide discretionary powers supported by a relatively small OFTEL agency, was meant to avoid the extensive bureaucracy of the American regulatory agencies like the Federal Communications Commission and to stimulate entrepreneurship within the British public administration. Besides the goal of revitalising the governance of a former monopolistic market and enforcing policy innovation, another goal to be achieved through the OFTEL/DGT-structure was to strive for efficiency through the active encouragement of fair competition and equal market access and the installation of price-caps to control BT's prices under a flexible formula.

The composition of the dominant coalitions in the policy network changed significantly in the 1980s and early 1990s. In addition to the solid position of BT and the Department of Trade and Industry, there was the entry of influential players, like new (private) operators such as Mercury/C&W, Vodafone, the American RBOCs and various small service providers, the overdemanding business users (organised in the TMA and TUA) and the OFTEL-agency. The unions and large sections of residential users (e.g. those living in peripheral and rural areas) became outsiders in the new competitive model. The crucial position of BT and the Government (through the Treasury and DTI) was left relatively untouched. BT successfully developed into the national champion of UK telecommunications, the largest European carrier (a 'Euro-champion' in terms of profits and market capital) and after its link-up with MCI, BT is heading for a major global position in the world telecommunications industry. BT avoided a divestiture of its business into a number of independent firms and effectively coped with competition from Mercury and new market entrants, like cellular radio operators and cable television companies. Although one could say that BT was simply too big to be vulnerable to market competition from players who still had to establish themselves and was protected from detailed regulation and scrutiny thanks to the 'light' DGT/OFTEL regime, that also had to establish itself. DTI instigated major policy innovations between 1979-92 replacing a monopoly framework, via managed competition (duopoly and market liberalisation) with to a free and open market in the making. The City institutions were important in a two ways: as institutions directly or indirectly participating in the financial sector they were involved in the various privatisation projects under Tory rule and as large telecommunications users they were effective in putting forward their demands for low-priced and high-quality services. Multinational companies, increasingly concerned about the best value for money (price, quality, and connectivity) in telecommunications, have been attracted by the deregulated and competitive business environment of the UK.

The powerful position of the unions in the good old days of the Post Office was heavily challenged under the Thatcher Government and the new BT Management. Their power base became severely weakened: the unionisation went down from nearly 100 per cent in 1984 to less than 80 per cent ten years later and their unity was broken by fragmentation among the unions and by an effective counterstrategy by BT Management to impose flexible working arrangements. In the newly established operator C&W/Mercury, pursuing a radical union de-recognition policy, the role of the unions in centralised wage bargaining was replaced by individualised and/or decentralised bargaining. The unions traditionally representing BT employees, sought to broaden their power base to include the newly established operators, like Mercury and cable operators. They also attempted to link their case to the broader issue of the consequences of privatising public ownership and draw attention to the demands of the relatively under-represented, the residential consumers, the elderly, the disabled and so forth. Other losers in the UK setting are the residential consumers: the cross-subsidisation scheme that facilitated cheap local charges has been abolished making local charges in the UK amongst the highest and international calls amongst the cheapest in Europe.

In short, clear-cut liberalisation was regarded as the appropriate means to modernise Britain's infrastructure and bring it to the forefront of the tele-services society. The element of short-termism, pointed out in the introductory sections on the British business culture, also played a vital in the case of structural reform of UK telecommunications. The rapid floatation of BT released the government of the PSBR-restrictions and enabled BT to finance its plan for network modernisation through the capital market. The introduction of competition in most parts of the telecommunications market and the imposition of tight price controls and other regulations, forced BT to maximise its immediate competitive edge by improving the corporation's efficiency (i.e. shedding almost 50 per cent of its workforce) and aiming for high levels of profits to satisfy shareholders and (business) customers. BT has developed from a hierarchical and monopolistic administration with consensus-seeking industrial relations and a strong engineering-orientation into a highly profitable and competitive commercial enterprise, that is both responsive to customer needs and well-equipped to compete in the international market place. A similar strategy has been followed by C&W and its subsidiary Mercury. In fact, the entire services industry, being highly dependent upon the provision of specialised and efficient telecommunications facilities, has benefited from the restructuring measures of the 1980s and 1990s. The domestic and international viability of the London-based services industry clearly has improved over the last decade. The British strategy has been to maintain London as the telecommunications hub of Europe by having significantly lower international tariffs than the other countries. This competitive policy has helped in attracting foreign companies to locate in, or route their traffic via London.

The structural weakness of the UK economy in manufacturing and its strength in business services was discussed in section 1. A 'perverse' effect of the radical British deregulation strategy is that the position of domestic equipment manufacturers has deteriorated (Cawson *et al.* 1990: 97-114). The British manufacturing industry, exemplified by GEC, Plessey and STC, has been far from successful at home as well as overseas: the employment in the UK equipment industry fell with 48 per cent between 1976 and 1986 (e.g. France: -16 % and Germany: +11 %) (Cawson *et al* 1990: 82). To allow for an efficient and effective modernisation of its infrastructure, BT successfully challenged the cartel-like status of the 'ring' of its traditional suppliers. BT rationalised the joint System X programme and building up a manufacturing base for itself through the acquisitions of Mitel and McCaw. The poor performance of the British producers and Post Office/BT's long-term ambition to introduce (some forms of) competition in equipment supply led to a restructuring of the industry through consolidation and foreign investment and take-overs. GEC and Plessey merged their domestic activities in GPT and linked up forces with the German global market player Siemens, taking a substantial stake in GPT, to achieve economies of scale and increase exports. In the home market GEC, Plessey, and STC were confronted with competition from the British-Swedish company Thorn-Ericsson that provided a second switch to BT. In the early 1990s STC was taken over by Northern Telecom. In 1989, BT replaced its strategy of vertical integration by a 'core' strategy focusing on global networking; its manufacturing activities were sold and

BT focused on providing a variety of telecommunications services to multi-national businesses through a link up with international operators (MCI) and specialised service providers.

Big business seems to be the big winner in the UK-setting. Liberalisation of the market, privatisation of BT and the re-regulation of the rules of how game has to be played has clearly benefited large business users. Most of the demands of the business user community have been met: charges have gone down, new services have been provided, and second or even third sourcing has been introduced (e.g. the relationship between large users and BT and Mercury; and between BT and its preferred suppliers GEC/Plessey and the 'foreign' supplier Thorn Ericsson). BT has become very active in the development and exploitation of value added networks services and in the outsourcing & one-stop shopping market-VANS market, where BT handles the cross-border routing, management and billing of telecommunications flows of multinational businesses. The highly competitive climate has definitely contributed to London becoming the major telecommunications hub in Europe. The influence of the European Community upon the restructuring of British telecommunications has almost been absent. The pro-competition regime of the UK was clearly ahead of the liberalisation proposals of the Commission and the modest deregulation practices found elsewhere in the Community.

7.3 *Institutional Analysis of Dutch Telecommunications*

In the Netherlands a delicate compromise was found between measures aimed at liberalisation and the promotion of innovation and market competition on the one hand and consolidation of an exclusive PTT-monopoly with regards to the infrastructure and basic telecommunications services on the other. The policy outcome, however, characterised by a market that is far from transparent, the near-monopoly of PTT on strategic information and the weak position of the administrative agencies, still reflects the dominant position held by PTT before 1989. The obscure regulation of the relationships between KPN/PTT and its stakeholders clearly bears the mark of the halfway liberalisation and privatisation measures of the late 1980s. Slaa (1987) has characterised these policy changes as incremental and half-hearted. No clear strategic choice was made either for PTT as just one of the players in a liberalised market, or as a national champion in a leading and privileged role in technology policy. The markets for terminal equipment, value added networks, and tele-services market became fully liberalised in 1989 while at the same time the government respected the central and privileged position of KPN.

The Dutch system of policy formation and implementation in general and in domestic telecommunications in particular, exhibited a distinctive framework of concerted action and consensus seeking between public and private authorities. Such a negotiated system facilitated the active search for compromises that were acceptable and mutually advantageous to all the major parties involved and avoided political conflicts and controversies. The Dutch have a policy tradition of using corporatist boards and ad hoc advisory committees that function (semi-)independently from Cabinet and Parliament. These committees attempt to

create internal consensus within the relevant policy communities. The actual political decision to accept and implement the policy measures proposed by these advisory committees is of course taken by the Cabinet and enforced by Parliament. The character of the external advisory boards changed with the installation of the Wagner Committee, dealing with the stimulation of economic growth, and the Steenbergen Committee, dealing with reforming telecommunications. The basis of the recruitment of the members and chairmen of these Committees shifted from stakeholders representation (or corporatism) to business merits (or technocracy), supported throughout by professional expertise. One factor remained unchanged, however: recruitment still took place outside the political community. Before the 1980s, the members of the (ad hoc) advisory committees were recruited on the basis of the extent to which they represented the relevant stakeholders in PTT and telecommunications policy (like in the Advisory PTT-Council). Examples of this kind of representative advisory committees in Dutch telecommunications are the Zoutendijk, Swarttouw, and Zegveld Committees. These committees were characterised by a strong government involvement, a broad representation of the various interest groups and a strategic position of the PTT carrying out the secretariat of the Committees on behalf of the Ministry.

The Goedhart Committee and the original line up of the Zoutendijk Committee were characterised by a strong government influence, all the relevant departments were more or less represented. These first Committees could be labelled as *statist*: the represented parties were mostly the departments involved in some way in telecommunications, with some individual experts and interest groups. The second group of Committees, Zoutendijk II (the second line up), Swarttouw, and Zegveld, could be called *corporatist*, in that they consisted of a panoply of relevant public and private stakeholders. Whether statist or corporatist, these advisory committees did not produce a major breakthrough, they had only an incremental effect on telecommunications policy making. And given its strong position, PTT supported by its Ministry, could slowly expand its business scope. For example the Goedhart recommendations were neutralised in a pitched battle between the Ministry of T&PW on one side, and the Treasury and the Home Department on the other. The Zoutendijk Committee was also hampered by fierce discussions between the ministries in charge of telecommunications and mass media policy and between public and private actors. The moderate liberalisation proposals of the Swarttouw Committee were shelved for two years, before the Steenbergen Committee gave them a second chance. These periods of non-decision making led to a kind of hidden imperialism by PTT, securing its monopoly on the infrastructure, equipment and basic telecommunications services and slowly extending it to the market of value added services (e.g. Viditel). The recommendation of the Zegveld Committee to integrate the PTT infrastructure with the local cable networks led to serious and laborious negotiations between the PTT and the local cable operators. However, the policy alternative of network integration, as put forward in the Zegveld Report and endorsed by the government in its White Paper, was officially abandoned in 1992. The proposal for nationalising the cable networks and system integration, legitimised by a natural monopoly and a duplication of the infrastructures, might have been feasible in a stable environment, but

conflicted with the pro-market developments, that challenged existing public policy from the mid-1980s onwards. The 'plan-economic' alternative of the Zegveld Committee had not taken into account the development of technological alternatives, uncertain market expectations for new services and further deregulation at national and international level. Furthermore the integration proposal ran counter to the creation of the Internal European Market and its envisaged curtailing of national monopolies.

The breakthrough in Dutch telecommunications was created by the *technocratic* Steenbergen Committee. Compared to the other committees, the Steenbergen Committee was relatively small: a triumvirate of experts in the fields of business administration/automation, telecommunications engineering and labour/corporate law. Its members, acting as real policy entrepreneurs, were successful in creating a broad support for far-reaching institutional change in the Netherlands. The Committee was supported in its task by the management consultancy firm McKinsey. One of the reasons why the Steenbergen Committee was so successful was that it clearly benefited from the work the other relatively ineffective committees had prepared. Nevertheless, it was the Steenbergen Committee that made the political breakthrough possible. The rather moderate proposals of the Swarttouw Committee for creating a distance between PTT and government, were shelved, because of strong opposition from the left-wing parties, trade unions and the protected domestic telecommunications industry. The Swarttouw proposals fitted well within the ambitious *Reconsideration* Programme of the Lubbers I Cabinet, launched in the early 1980s, to redefine the boundaries of the public sector and to cut back public expenditures. The Steenbergen Report advocated a corporate autonomy for PTT and more market competition in postal and telecommunications service provision. In financing of the modernisation of its network PTT would no longer put pressure on the Budget. The combination of liberalisation and privatisation, as suggested by the Steenbergen Committee, fitted perfectly within the Reconsideration Programme. As a consequence, the Cabinet subscribed to the Steenbergen proposals within six months and the report was whole-heartedly accepted in Parliament. In the Committee, consensus was created in a de-politicised, technocratic and business-like manner by emphasising the combination of mere fact finding (by the Committee itself, supported in its task by McKinsey) and the consultation of the various stakeholders. Instead of being a broadly composed committee, where all the various interest groups participated and conflict of interests could easily emerge, the Steenbergen Committee was small, its members highly qualified and without official political ties, and the various interest groups were consulted separately so as to reduce political conflicts to a minimum. These factors facilitated the enactment and implementation of the Steenbergen proposals as the official telecommunications policy of the Dutch government.

After a period of intense negotiations, the new legislative framework, replacing the 1904 T&T Act, was finally adopted and implemented. Although the equipment and the tele-services markets were liberalised and PTT was granted corporate autonomy, the principles underlying and guiding the new legislative framework still relied, on the natural monopoly of the public network and the basic services and the protection

of PTT's privileged position against by-passing and cream-skimming (i.e. unity of control). It was believed that the 1989 Act would be flexible enough to cope with the major techno-economic and international developments taking place in the short and medium term. In the late 1980s the Netherlands were indeed one of the more liberal regimes on European Continent, characterised by liberalised fringe markets, a corporatised PTT and a more distant role for the state. The country, however, lost its comparative advantage and fell back on a more moderate liberalisation strategy (clearly behind the UK and the Scandinavian countries). The effects of the ongoing liberalisation and deregulation trend, triggered by techno-economic and international developments and the active involvement of the European Commission, have clearly been neglected in the Netherlands. While most member states were implementing the EC-liberalisation programme in their domestic settings, the Dutch policy makers between 1988-92 exhibited a defensive attitude in reconsidering and adjusting their governance regime of 1989. In the first political review of KPN's performance and the newly established regime in 1992 it became clear that the legislative framework based on the consolidation of a PTT-controlled core monopoly was no longer valid given the increase of international competition and EC instigated deregulation in European telecommunications (TK 1992/93: 21693/8). Just when the Dutch had completed their new legislative framework after the Swarttouw and Steenbergen investigations in 1987/88, the European Commission started to unfold an impressive list of rules, directives and regulations that would foster the creation of an Internal Telecommunications Market. As a consequence, the Netherlands were forced merely to follow and implement Community legislation on telecommunications, since domestic regulation, supervision and steering had become increasingly inadequate. Although the liberalisation of datatransport and satellite communications was prepared and enacted between 1991-93 no substantial action was taken before 1993. For example the complaints about the insufficient supply of planning information by PTT, the conflict of interest between its public and commercial functions, and equal access/and fair competition, that were voiced between 1989-92 were played down by the government. These problems were regarded as transitional shortcomings of the new regime. At the time the government still regarded telecommunications policy, supporting the interests of the domestic industry and national infrastructure, and PTT-policy, preserving the corporate interests of PTT, as convergent and identical.

From 1992 onwards the political agenda contained issues that urged examination, discussion and settlement. In Dutch policy making the focus was on negotiating single topics and short-term problems, like the legislative amendment needed to liberalise mobile communications; the review of the 1989-legislation in 1992-93; the decision whether to carry out the separation of PTT Telecom's public and private activities; the floatation of KPN envisaged in 1993-94; and the consolidation of the private networks of the utilities, railways, and cable companies into a single national network operator and the consequent installation of a network duopoly (1994-96). A coherent long-term strategy for the domestic telecommunications industry, putting the various issues and alternatives in a broader perspective, was notably absent in the Netherlands. In their search for consensus, Dutch policy makers were able to bring about only gradual and incremental change: they were poorly equipped to cope with

major disturbances in the international telecommunications (e.g. technological change, European integration). Windmuller (1969: 434-441) noticed that the Dutch have an extremely complex system of decision-making, promoting a time-consuming and elaborate search for consensus on the strategy to be followed and accepted by the major stakeholders involved. Policy innovations require an extended period of gestation in which a new form of consensus about the desired trajectory is established. When new structures have been institutionalised after many years of discussion and negotiation, there is often a dominant idea in Dutch politics that when these major problems have been solved through institutionalised consultation, these compromise solutions will be appropriate for the forthcoming period. This *idée fixe* has proved a major handicap in the second liberalisation/deregulation round in Dutch telecommunications policy. The consensus regime of the Netherlands proved successful in the formulation of an early and appropriate policy response on the basis of the Steenbergen Report. The implementation of these recommendations in a new legislation gave way, however, to an introspective view on the domestic politics of accommodation and a *nonchalance* towards the wider technological, European and international telecommunications environment. The advisory RAPT-body stated that decision making in Dutch telecommunications was merely slow and incremental, offering little prospects and lacking strategic orientation: *"The process by which Dutch policy is generated, like the institutions that play a role in it, is still geared towards national accommodation. Therefore the policy cannot keep up with the commercial and technological dynamics coming at us from the outside world (RAPT 1991b)."*

After implementing the new legislative framework the policy-makers of the recent past failed to recognise the need for a post-Steenbergen update with a clearer market orientation and a more transparent institutional structure. The adopted strategy was above all aimed at protecting PTT's interests in the new market context and avoided controversial decisions like the reduction of entry barriers, asymmetric regulation and the promotion of fair competition. Although privatisation and deregulation have created a revaluation of market principles at the expense of hierarchical state intervention, too little thought has been given to the fact that, even in such a liberalised environment the government cannot rest on its laurels. One important task for government remained in determining, monitoring and supervising the framework within which public service could still be provided and competition stimulated. The administrative agencies HDTP, RAPT/CAPT and the Consultative Body PTT were originally designed to prevent one of the parties dominating the rest and to guarantee a healthy competition. This administrative set-up made an uncomfortable combination of supervision and consultation unavoidable. Reality has made it clear, however, that these institutional arrangements are insufficient. On the basis of its established monopoly in the traditional regime and its persistent monopoly in strategic expertise, PTT has been able to shape the conditions of the current framework through its direct involvement in the preparation of the 1989 Act and through its close links with the Minister and HDTP. PTT and the government (as shareholder and regulator) had a mutual interest in strengthening the strategic and economic position of PTT Telecom by keeping its public and commercial activities

integrated and moderating (or delaying) radical liberalisation and deregulation proposals. This would facilitate the corporate expansion of KPN and turn its floatation into a commercial success. Because of PTT's strong position in the present post-monopoly context it might be difficult to change this situation.

In the near future a network duopoly is envisaged in which managed competition will exist between KPN and a Dutch-based contender. The liberalisation programme will continue with the opening up of voice telephony by 1998. The government finally seems to realise that telecommunications policy includes more than PTT-policy alone. The international expansion of PTT Telecom was furthered by excluding voice telephony from the Dutch liberalisation proposals. This would allow PTT Telecom to keep a solid base in its home market. The interests of cable companies, public utilities and other private operators were catered to by allowing them to diversify into the provision of telecommunications services. The plans for network duopoly and full liberalisation clearly respond to the articulated need of large business users for cheap, flexible and customised telecommunications services. A few critical comments on the 1993-1994 proposals to initiate a second deregulation round could be made. Firstly, in these proposals the stakes of residential consumers are subordinated to the interests of business users and producer interests, making universal service and regulation more complex and difficult to achieve. Government intervention still seems to be required to regulate (scarce) radio frequencies and number plans, and the resolution of disputes of interconnection and access charges. Secondly, the proposed distinction between voice and datatraffic made in the original plans would be difficult to regulate and supervise in a fully digitised network environment. Thirdly, the implementation of effective network competition could be impeded by the dominance of the PTT-owned Casema in the cable market. Fourthly, the Minister's proposal for allowing only one nation-wide operator, in which cable companies, utilities, and Dutch Rail NS participate, could be seriously questioned. Given the lack of expertise, investment capital and market orientation, the cable companies, Dutch Rail NS, the energy utilities and cable operators rely on (a) strong foreign business partner(s) in order to compete effectively with PTT.

In order to make the regulation and supervision of the Dutch telecommunications industry more effective politically and economically, an independent regulator could be established. In carrying out its administrative tasks, such an OFTEL-like body should be supported by an elaborated and sharpened domestic competition policy. The underestimation of the aspect of the promotion as well as scrutiny of competition has been one of the determining factors in the malfunctioning of the newly established regulatory and consultative structure. The government department HDTP, for instance, was not given a clear responsibility to encouraging innovation and competition in Dutch telecommunications; furthermore it was poorly equipped in terms of staff, expertise and mandate to take on a more regulatory stance to sustain effective market control (in terms of ensuring quality of service provision, non-discriminatory access, anti-trust enforcement etc.). More in general, competition policy as a means of improving the performance of domestic business, the network industries and the national economy as a whole, has been overlooked in the Dutch setting. In addition, the consequences of the 1989 decision to liberalise markets and

postpone the decision to privatise PTT to 1994 and the concomitant conflict of interest between the government as sole shareholder and the government as regulator/supervisor have insufficiently been realised. The Treasury was very much interested in generating financial gains through short-term dividends and taxes and for the medium term in selling the assets of an efficient and effective PTT corporation. At that moment, it was in the interest, both of the Dutch government and the corporation to be privatised, to restrict domestic competition and wait for the right moment of floatation. This will buy time to complete the internal reorganisation and build up market experience, which will boost the chances of a successful (and profitable) floatation. Effective regulation relies upon a framework of competition legislation shaping the economic structure and action of firms and industries. Competition policy clearly contributes to market transparency and efficiency by preventing or penalising any illegal business practices while at the same encouraging the creation of more dynamic industries.

In the Dutch telecommunications framework, characterised by market dominance, conflicting interest within the government and structural information asymmetry, regulatory reform would seem necessary. PTT built its strong power base on the close relationship with the Ministry of T&PW and on its exclusive monopoly on technical expertise and policy information. The coalition between PTT and its Ministry was a *rent-seeking* one, with the PTT acting on behalf of the Ministry, the Ministry working on behalf of the PTT and the two of them working closely together for their mutual benefit and extending their scope of activities. The gradual implementation of market competition furthered the short-term objective of the government of reducing the public deficit. A relatively stable business environment where PTT would be dominant both economically and politically would generate high dividends and influence the valuation and sale of KPN-stock. Like before, PTT and telecommunications policy serve as fiscal instruments for achieving 'bigger' macro-economic objectives. The over-active involvement of the Treasury in the bidding process for the GSM-licenses and the preparation of the floatation of KPN are clear illustrations of this. The absence of market transparency in the Dutch communications market makes it hard to estimate the actual value of KPN and the success of its diversification and internationalisation strategy so far. Not only the state and market players lack strategic information to examine the overall internal efficiency and competitiveness of PTT, but neither can (potential) shareholders in the stock market rely on sufficient data for their critical decisions to buy KPN-shares. The sale of a majority of KPN's shares and the gradual opening up of the telecommunications market between 1994-98 will make the Dutch market more open and the regulatory framework more transparent.

An important plea for structural reform was made by PTT itself. After losing its legal entity status in 1954 PTT-management was severely handicapped in the operation and carrying out of its public services due to political constraints and detailed supervision. In 1963 the Goedhart Committee had already recommended giving PTT more autonomy in its investment and employment policies, but this advice met with insurmountable political opposition. Technological and economic developments in telecommunications in the 1970s and 1980s made the lack of

flexibility on the part of the government apparatus with respect to investment and employment conditions even worse. Notwithstanding the high degree of government interference and supervision, the fact that PTT was extending its scope of activities in that period by gradually incorporating new infrastructural and service developments into its monopolistic portfolio of activities (with some of them only indirectly related to PTT's core function) was not yet questioned. In the home market it diversified from traditional telephony into newly emerging markets (like cable and datanetworks, enhanced services provision). Together with its Swedish, Swiss and Spanish partners, PTT Telecom became strongly involved in the creation of one integrated European long distance carrier that would provide one-stop shopping services for multinational companies. Later this joint initiative by the PTTs of small/medium sized countries was followed by a joint venture of Unisource with AT&T Europe and extended beyond Europe when Unisource decided to join the AT&T-inspired Worldsource consortium. PTT has not resorted to the courts in an effort to enforce and protect its monopoly, but was taking up the competitive challenge as combative entrepreneur by increasing internal efficiency, lowering tariffs, improving its service and building up global presence. PTT controlled its external dependencies by enlarging its knowledge base and capabilities at the expense of its stakeholders and controlling the policy formation process by actively participating in trade associations, and building up partnerships with various market players.

The equipment manufacturing industry turned out to be less powerful than in other countries (notably France and Germany) partly because of its small scale and furthermore because of internal differences of opinion between the exclusive club of preferred suppliers, made up of one (semi-)domestic supplier (AT&T/Philips) and two foreign providers in (ITT/Alcatel and Ericsson) and a group of excluded suppliers like Siemens and other potential new entrants. The role of the trade unions in the reform process in the 1980s was at first defensive opposing the Swarttouw recommendation to liberalise terminal equipment (1981-83) and the privatisation initiative, originally proposed by the Steenbergen Committee in 1985. Once the unions realised there were no feasible alternatives to privatisation, they played a more positive role in the restructuring of the PTT-administration by an active involvement in the design of the wages and labour conditions of the new KPN-company. Initially the number of redundancies within KPN (both Post and Telecom) has been marginal, but after 1992-93 it has gradually started to cut back its work workforce.

The conflicting interests of the government would be reduced by a governance transformation, inspired by the creation of checks and balances and a *separation of powers*. First, the often conflicting roles of the government in telecommunications policy (policy maker, regulator, shareholder, responsibility for transsectoral competition policy), could be divided up between policy making Ministries and independent regulatory and anti-trust agencies. The close relationship between government and PTT, together with the obscure division between policy making and regulation, may be remedied by farming out the task of rule-making from the Ministry to an independent regulatory agency for the domain of public communi-

cations. If large parts of the communications markets are liberalised, detailed rules as well as strong and well-equipped controlling bodies are required to monitor the separation between the public and commercial activities of the regulated companies, to set price controls, to provide universal service and to secure quality of service, interconnection and fair competition. Such a complex situation could imply that a large number of stakeholders demand the strengthening and/or the redesigning HDTP's position. One could think of an enlargement of its organisational capacity and expertise, and monitoring facilities or an extension of the powers of HDTP and possibly merge it with the Media Commission. An effectively regulated monopoly, however, could only be achieved by creating specialised sectoral agencies and a sharpening of the anti-trust/cartel legislation. The latter might be achieved by creating an independent commission for an overall competition policy alongside the industry-specific regulatory body for the telecommunications sector. Another step should be to make competition policy in the Netherlands more adequate and stringent. Possible remedies could be to amend the outdated Competition Act, to strengthen the powers of the Ministry of Economic Affairs or through the creation of an independent agency in charge of competition policy. This could effectively link regulatory policy at the level of network industries (i.e. telecommunications) and transsectoral competition policy at the macro-level of the national economy. With an effective implementation of competition policy at the national level, the Dutch telecommunications sector might not only become more efficient and dynamic, but also more able to cope with the demands and opportunities of the Community's Internal Market and EC-wide telecommunications regulation.

7.4 *Institutional Analysis of French Telecommunications*

France Télécom has become a recognised, efficient and innovative player in the world telecommunications industry. The same holds true for CIT-Alcatel and the larger domestic equipment industry and associated sectors (including the public R&D, software and electronics), which also managed to survive, equal or even surpass international contenders. Nowadays Alcatel is one of the largest equipment manufactures in the world, CNET is probably the only R&D institution that is in the same league as AT&T Bell Laboratories, and companies like CGS, SGS-Thomson, and Thomson Consumer Electronics are among the few European firms which survived in the technologically advanced and highly volatile markets of software, semi-conductors, consumer electronics. Traditionally, the telecommunications function (DGT) in the French PTT has been treated as the little brother of the postal branch, which controlled the administration. In addition, the company was ignored by the government, which was unwilling to allocate public funds for network expansion and infrastructure modernisation and restricted access of the DGT to external capital markets. Furthermore, DGT was exploited by a cartel of domestic equipment suppliers. Before the development of the telecommunications infrastructure and advanced services was defined by the government as a priority area in 1976, the situation improved a little for the telecommunications administration DGT, when the borrowing constraints imposed by the Ministry of Finance on the telecommunications

operator were substantially eased, and specialised financial institutions were set up to raise money on capital markets.

The track record of France Télécom from the late 1970s to the mid-1990s is impressive. The company 'wired up the nation' at high speed, it modernised its infrastructure from one of the poorest to one of the most advanced, and it effectively caught up with the techno-economic leaders in the field. For instance, while in 1968 a mere 15 per cent of French homes had a telephone, twelve years later this figure had risen to 80 per cent (De Gournay 1994). The roll out of an advanced fully digitised networks has allowed France Télécom to pioneer with and roll out new technologies, networks and applications, such as fibre optics and coaxial systems, electronic directories, videotex and other tele-information services, packed-switched datanetwork, digital and multimedia switching, pay-tv applications, ISDN and intelligent networks, smart cards, etc. The performance and quality of service levels of the French telecommunications services industry is good (OECD 1990; 1995). For instance, France Télécom claims that more than 92 per cent of all the customers are satisfied with the quality of service and the performance (France Télécom Annual Report 1994; Chamoux 1993). In terms of efficiency, France Télécom is one of the most efficient telecommunications operators in the world (measured in lines per employee) and with a relatively 'slim' workforce. In the mid-1980s when BT had a workforce of approximately 250,000, DGT/France Télécom had about 90,000 less. Ten years later, however, when BT is heading to cut back its workforce to less than 100,000, the number of people employed by France Télécom was still about 160,000.

From a long term perspective, the French government has been successful in reducing DGT and CNET's dependence on foreign firms by fostering the establishment and commercial development of Alcatel as a French-owned equipment supplier and an internationally leading company with strong technological capabilities and - after its acquisition of ITT - a global presence in equipment switching. Together with the government and CNET, DGT played a substantial part in the rationalisation and the *francisation* of the domestic equipment industry. After Alcatel was established as a national champion, the French government was unwilling to reduce the dependency of France Télécom and its single core supplier. Despite strong efforts from France Télécom to introduce competitive tendering between Alcatel and a strong foreign supplier (e.g. AT&T), the government took the safe path by allotting a minor market share to a French-Swedish consortium (i.e. Matra-Ericsson), that acquired the CGCT company and hereby creating some fringe competition.

So the cartel-like market-sharing arrangement between the preferred suppliers was replaced by a monopsonistic relationship, in which France Télécom still paid excessive charges for its equipment. Despite France Télécom's efforts to play off the two suppliers against each other, the company found itself once again seriously overcharged by Alcatel at the end of 1994. With the substantial weakening of Alcatel's power base, as a consequence of losing market shares and hampered by a recent case of large-scale corruption and overcharging, France Télécom may

eventually be successful in cutting back expenses by introducing competitive tendering and following a 'value for money' approach.

The relative success in the upgrading of their backward telecommunications infrastructure in the 1970s and the effective society-wide diffusion of telematic applications (e.g. Minitels, Transpac, ISDN, fibre optics) clearly showed the capability of the French to promote new technologies and implement society-wide technology programmes. These ambitious programmes, capitalising on the telematics revolution, were aimed at acquiring the technical expertise and developing the key technologies of the future from a powerful base at home before and launching an assault on foreign markets. The successful ones have focused on high technologies, that have a clear strategic interest to the nation, and are associated with developing markets, that can be negotiated and managed through bureaucratic leadership. In order to achieve centrally defined goals, such as technological independence and techno-industrial catching up, the French government has been willing and able to undertake large and high-risk investments in emergent technologies and markets (e.g. digital switching, Minitel) and supporting domestic industries in exports and international competition. The central government has sought to manage the process towards catching up by ensuring demand through nationalistic procurement policies, preferential treatment of domestic firms through trade protection, and powerful government officials guiding the project. In order to overcome an initial knowledge and technology gap, the French state was also involved in setting up an appropriate institutional structure of state-controlled enterprises and industries (France Télécom and Alcatel), large public R&D subsidies (channelled through CNET), and elite engineering schools (ENST).

The telecommunications modernisation programme was at first carried by the public research body CNET, that was succeeded by the French PTT, the DGT. The French industrial policies have been given a clear priority to top-down approaches, producer-oriented and technology push programmes over bottom-up, demand-led and commercial diffusion-oriented. An important factor in explaining the path followed by the French, is the planning-engineering coalition of state bureaucrats, high-ranking officials of the state-owned companies (DGT/France Télécom) and state-sponsored companies like Thomson and Alcatel Alsthom. French telecommunications policies in the 1980s still reflected some of the elements of its past of an effective 'techno-industrial catching up' strategy, symbolised by the construction of a highly advanced network and the successful mass introduction of Minitel in the 1970s and the 1980s. Ergas (1992: 11) has characterised the modernisation of the network and the large-scale diffusion as *'an engineering solution to a political problem more than a commercial solution to the needs of the market'*.

With its built-in biases' towards supply-led or technology-push approaches, administered markets (with limited competition and negotiated trade (i.e. protection), and the search for economies of scale and scope to replicate the Telematics programme, current French telecommunications policy has to come to terms with the world of the mid-1990s. It is questionable whether the French state-led and engineering-shaped strategies are still viable in an telecommunications environment, characterised by the emergence of service and network diversification and the constraining impact of an

integrating European market and international deregulation on the domestic governance regimes. Despite the tight financial restrictions on the French government and France Télécom to meet the criteria for economic and monetary integration, and prepare its privatisation, respectively, the state-led industrial strategies prevailed when two ambitious programmes were presented and discussed in the information superhighways framework. The first suggested a challenging plan for the widespread diffusion of video-phones (despite the unfavourable results of all the market tests). The second proposed to roll out a high-cost nation-wide fibre to the home network, to be rolled out and controlled by France Télécom (despite the trend towards infrastructure competition and de-monopolisation of telecommunications, and the emerging rivalry between fixed, satellite and radio networks).

The high-risk state-led strategies to stimulate techno-industrial catching up, however, were not always successful. Especially in cases, where market development and technological change could not be controlled within national boundaries and where innovative entrepreneurship and international competitiveness were required, like computing, semi-conductors and consumer electronics, the French results have been less impressive. Also in the core telecommunications domain, where the impact of dynamic technologies and volatile market forces on long-term industrial policy could not be neutralised, expensive commercial failures were the result. Examples of DGT/France Télécom (and other domestic stakeholders) overestimating the capacity for shaping and controlling a more dynamic telecommunications environment are: the Plan Cable (rivalled by terrestrial and satellite broadcasting), Telecopieur a la Grande Diffusion (overtaken by much smaller fax machines manufactured in Japan), and cellular equipment and cellular network operations (the potential was underestimated by both Alcatel and France Télécom).

7.5 *Liberalisation, Privatisation, and Regulatory Reform of Telecommunications: The UK, Dutch and French Strategic Responses Compared*

A growing tension has emerged between the continuing globalisation and Europeanisation of business on the one hand and a decreasing national sovereignty on the other hand. Techno-global pressures, combined with deregulation and European integration, threaten the relative autonomy of the European nation state in developing its domestic policies and require a redefinition of the national sovereignty and an adjustment of the national practices in the light of these international pressures. The traditional manoeuvrability for European governments in designing their national industrial policies and the efficacy of their interventions has declined considerable: technologies of freedom, the globalisation and differentiation of markets, international deregulation, and European integration have made an evaluation and reform of the traditional PTT-dominated complex necessary. The options for pursuing traditional and nation-specific policies have been seriously reduced for many countries, not only for small European countries that are strongly dependent upon international markets (like the Netherlands), but for large European countries like Britain and France as well. Notwithstanding these structural forces constraining national stakeholders in their manoeuvrability, the degree and pace of

implementing these institutional changes in European telecommunications exhibited some differences between Britain, the Netherlands, France and the European Community as such in their adaptation to the structural changes in telecommunications (see figure 7.1. & table 7.1).

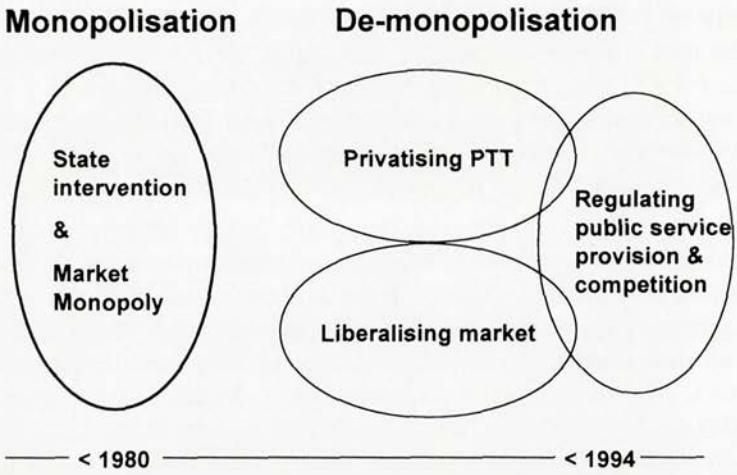

Figure 7.1: Governance Transformation in European Telecommunications (1980-1994)

The ongoing process of European integration brought forward another constraint for the member states' governments in the development of telecommunications policy. From the mid-1980s onwards, national policies needed to be more in line with the policy directions spelled out by the European Commission. With the pre-eminence of Community law over national law, more and more legislative competencies have been transferred to the EC-level. As assumed in this study, European integration is one of the four structural forces, that has significantly enlarged the impact of Community regulations on national policies and reduced the decision making manoeuvrability of the member states in designing their own policies. In its aims of integrating the national markets into the creation of an internal market the Commission, next to the continuous harmonisation of member states' telecommunications policies, increasingly relies on economic regulation instead of governmental intervention. The liberalisation of the markets for telecommunications peripheral equipment and services was accomplished by 1993, national monopolies are restricted with the core public network subject to open network provisions, the operational and regulatory function of the PTT should be clearly separated and the heavily protected government procurement programmes (switching equipment) would be opened up. Given the complexity of regulating telecommunications and the restrictions on the Commission in terms of budget and work load, this might even lead to the hiving off of the Commission's jurisdiction to an independent regulatory agency (a kind of FCC at European level), analogous to the London-based European agency for testing new medical drugs.

Table 7.1: Market, Ownership, and Regulatory Changes in British, Dutch and French Telecommunications (1980-1994)

	Country Investigated				
Degree of Restructuring			United Kingdom	The Netherlands	France
	Degree of Liberalisation	public monopoly	1980	1980	1980
		terminal equipment	1989	1989	before 1980 (first telephone set excluded)
		value added networks and services	1981	1989-1993	1987-1993
		cellular services	1984	1994	1987
		voice telephony	1984	1997 (?)	1998
		alternative public network and resale capacity	1984	1995	1996
	Degree of Privatisation	state administration: civil service	before 1980	1980	1980
		organisational separation between the postal and telecommunication administration;	1981	1989 (still integrated at KPN holding level	1990
		corporatisation: managerial autonomy but state owned;	1984-1992	1989	1990 (semi-corporate)
		privatisation	1984-	1993-1997 (?)	1997 (?)
	Degree of Regulatory Reform	Government intervention and Political interference	1980	1980	1980
		separation between operational and regulatory functions	1981	1989	1989
		independent regulatory agency to secure the public interest and promote competition;	1984	1996 (?)	1997 (?)

In terms of liberalising the telecommunications markets and developing a new institutional structure based on regulation and competition the UK is far ahead of both France and the Netherlands, that at the very most have adjusted only incrementally to the structural changes. As part of an all-encompassing neo-conservative strategy of rolling back the frontiers of the state, the Thatcher-government pursued a radical policy shift already as early in 1979, starting with the separation of the telecommunications branch from the Post Office into British Telecom (BT) quickly followed by a privatisation of BT, and the overall liberalisation of the markets for telecommunications equipment and services. BT was established as an independent but regulated entity, that was confronted with competition from two competitive carriers: Mercury in public domestic and international telecommunications and Vodafone/Racal in the cellular radio market. The British telecommunications market, placed under supervision of a new regulatory agency, created in view of promoting competition and efficiency. This

agency, called OFTEL, is an example of innovative institution building through a single-industry regulatory body, backed by a sector-independent regulatory commission in charge of fair competition (the Monopolies and Mergers Commission).

The Dutch policy has aimed at gradually following international trends of deregulation, liberalisation and privatisation. In the Netherlands the process of establishing a regulatory commission for the telecommunications industry is still in its embryonic stage, a new institutional framework it is slowly evolving in which direct political involvement by the cabinet is reduced. The responsibility of the ministry in charge of telecommunications has been divided up into separate bodies for independent policy advice, consultation with stakeholders in the field and regulation. These semi-governmental bodies slowly move away from the sphere of influence of the government apparatus into the direction of an independent administrative agency. A policy alternative has been suggested for the mid-term to integrate the three para-governmental telecommunications bodies and an already established independent administrative agency for media policy to arrive at a kind of Dutch version of FCC or OFTEL.

France is a special case in European telecommunications policy, because in many ways it still follows a protectionist/mercantilist strategy with a strong state intervention imposing its will on the market place and basically securing its established institutional structures. The French political strategy in telecommunications still aims at supporting the interests of its leading domestic stakeholders in the sector: the ministerial bureaucracy (DGT-PTT) and its *grands corps* of telecommunications engineers, together with the national champion of the equipment industry (Alcatel). While nearly every western industrialised democracy regarded deregulation and privatisation as the adequate policy measures to combat the economic crisis in the beginning of the 1980s, the French socialist/communist government distinguished itself by implementing an ambitious interventionist programme aimed at extending the role of the state in the economy through nationalisations, huge subsidies for strategic industries and the launching of ambitious *grands projets*. These measures implied that the privileged role of the PTT-bureaucracy and public control over telecommunications was even further strengthened. The state-controlled PTT (DGT/France Télécom) followed an 'enlightened approach' in the large-scale development of new telematic services like videotex, while securing industrial interests of promoting them vigorously and at the same time responding to customers' needs with a cunning marketing strategy. And thanks to the large investments in the digitisation of the telecommunications network in the late seventies and the development of new tele-services in the early eighties, DGT/France Télécom claims to have the highest network digitisation rate in Europe, giving France a major competitive advantage over other countries in the commercialisation of ISDN services in the near future (France Télécom Annual Report 1994). This has been confirmed in a comparative study on the performance of seven industrialised countries, including the UK, France and the Netherlands: in terms of number of subscribers connected to digital exchanges France was number

one, Britain number two, while the Netherlands ranked sixth (PA Consulting Group 1994).

Liberalisation

The formerly integrated telecommunications industry has been divided into several submarkets: fixed public networks, the basic voice service, value added networks, enhanced services (e.g. dataprocessing) and tele-information services, terminal equipment, switching equipment, cellular and satellite services. These segmented markets were in varying degrees responsive to de-monopolising forces. In Western Europe, for example, the core public network, consisting of the fixed infrastructure, local telecommunications services and long-distance and international transmission, is still exclusively operated and exploited by the former PTTs (with the exception of the United Kingdom). At the end of the 1980s several fringes of the European telecommunications market have gradually and selectively been opened up to competition. Although the degree of competition varies substantially across Europe and the dominant position of the PTTs is still largely untouched, the markets for value-added networks (datacommunications, videotex, EDI, e-mail), telematic services, the market for peripheral equipment, cellular services and satellite transmission have been liberalised.

In 1984/85 after the majority of the domestic telecommunications market had been opened up to competition and BT had been privatised and listed on the Stock Market, the United Kingdom had established the most liberal telecommunications regime in the world. The early lead of the UK in the creation of a market-oriented regime was inspired by free market ideology (clearly against statism and corporatism), responsiveness to the needs of the large and internationally oriented business services community of the City of London and by sheer pragmatism to make BT and the domestic telecommunications industry more efficient. The Thatcher government followed a segmented liberalisation strategy, aimed at establishing different market structures in British telecommunications with the crucial market segments regulated by a soft regulatory regime. The markets for equipment and value added services were clearly liberalised, with hardly any barriers of entry left. For the provision of satellite communications, cable networks and value-added networks, licensing schemes were established with modest thresholds for penetrating those markets. In fixed network provision and cellular communications *de facto* duopolies were established, in which the incumbent BT would compete exclusively with respectively Mercury/C&W and Vodafone for a fixed period of time.

In 1990/91, the newly established managed competition regime of UK telecommunications was evaluated. The conclusion of the 'Duopoly Review' was that workable competition existed in the markets that were fully liberalised (e.g. equipment, value-added services), but that competition in local, long distance and international communications and cellular services was far from effective. The regime of administered competition that had been established in those markets, was clearly in favour of players with vested interests, like the 1st generation incumbent (BT) and to a lower extent 2nd generation incumbents (Mercury and Vodafone). To

foster efficiency, innovation and customer responsiveness in those crucial markets even further, a new governance regime based on asymmetric regulation was established. With the exception of international telecommunications, a second round of liberalisation measures was announced based on freedom of entry for new service providers into the exclusive domains of BT and Mercury, furthering detailed regulation and supervision by the OFTEL agency and handicapping the incumbents BT and Mercury by restricting or even precluding their entry into the emerging markets of respectively PCN, cable systems and home entertainment services.

While the UK government established its market-responsive regime of administered competition, the French and the Dutch were still considering and opting for an *enlightened* approach, in which the PTT administration, on behalf of the central government, would take the lead in paving the way for both business and residential consumers to the information society. In this interventionist strategy the government targeted the development of an advanced public infrastructure that would be exclusively controlled by the state-controlled PTT. At that time, PTT's exclusive domain included nearly every segment of the telecommunications market with the exception of terminal equipment and computing services, (including both the fixed infrastructure, basic services, datacommunications, value added networks (videotex and cable networks) and some parts of the enhanced services market. When the British had already established their market-oriented regime with a privatised BT, equipment and service liberalisation, modest entry barriers and moderate regulatory provisions in the core segments, the French decided, that only corporatisation of the PTT administration and a gradual liberalisation of the equipment and the services market were feasible in the near future. When these plans were finally accepted and adopted in France and the Netherlands, in 1986/91 and 1989 respectively, the British government had already embarked upon a new liberalisation path that would not only establish effective and workable competition in the entire telecommunications market, but also reinforce British leadership in telecommunications.

The recent initiatives in the Netherlands and France to continue the liberalisation process and include basic services and fixed network provision by 1995-98, show a combination of the first administered competition regime and the second free-for-all competition in the UK. The only difference between the UK on the one hand and the Netherlands and France on the other, is that the first has already implemented a working regime that fosters efficiency and innovation, while the two followers still have to establish a market-oriented governance regime that is more responsive to the market dynamics in telecommunications. In the late 1980s and early 1990s, when the Dutch and French PTT were corporatised and granted corporate autonomy, BT had already developed into a fully-fledged and profitable company, that operated multinationally by establishing strategic partnerships and had diversified into new services. The same held true for Cable & Wireless (the former operators of the British colonies, also privatised), that with its highly profitable subsidiaries Hong Kong Telecommunications and Mercury Communications, has clearly manifested itself in several developing markets and built up a global presence. The Dutch and French PTTs (and their dominant stakeholders, the national governments) were clearly more than five years behind on the commercialisation path. Unlike a freed

BT, that more and more responded to large users at the expense of residential users, the French and Dutch were still restructuring their central and hierarchical administration into a market responsive corporation, that would be prepared to meet competition at home and abroad. In building up a world-wide coverage in telecommunications the British are also well ahead. While both BT and C&W/Mercury have built up a solid market presence outside Europe (BT in the US with MCI and Syncordia, and C&W with HKT in Asia and Bell Canada) in the early 1990s, the French and Dutch PTTs are still in the process of transforming themselves from national telecommunications champions into Euro-nationals with the rise of the Euro-PTTs Atlas/Eucom/Eunetcom (France and Germany) and Unisource (Sweden, Switzerland, Spain and the Netherlands).

Privatisation

The relationship between the PTT, the government and the telecommunications industry changed from direct involvement in governing the telecommunications industry by a government department, normally a state-controlled PTT, to a governance structure in which the government operated more at arm's length from both the PTT and the telecommunications industry. In a public monopoly that has taken the shape of a nationalised industry, management, regulation and supervision were completely integrated into a single government department, allowing for synergy between the utility, commercial, regulatory and policy functions of the PTT administration, but also causing conflicts of interests between them. Recently, governmental discretion over PTT has been substantially reduced: government competencies on investment policy, strategic planning, social and recruitment policy and tariffs were transferred have become the direct responsibility of the PTT organisation. The national governments decided to hive off the PTT administrations from the civil service by granting them a legal corporate status under private law. This 'corporatisation' (or pseudo-privatisation) implied corporate autonomy for PTT Management and allowed for a more market-oriented and entrepreneurial drive within the newly established company.

In all the three countries investigated the PTT administration was given a legal corporate status, in which the civil service status was replaced by business autonomy for PTT management. In the UK this happened in 1969, in the Netherlands in 1989 and in France in 1991. Another organisational change within the PTT administration was the separation of the postal and the telecommunications functions. In the UK this happened in 1981, in France in 1984 and in the Netherlands in 1989 (although the two functions remain integrated in the larger KPN holding). The responsibilities in these new style-PTTs became differentiated between a 'public' branch, in charge of the regulated provision of infrastructure and basic services, and a 'private' branch, which was allowed to enter the market for peripheral equipment and value added services against the same conditions as any other private sector firm. The separation between the public and private functions of the PTT however differed from country to country and varied over time. In France, the UK and the Netherlands the split was limited to separate accounting between the public utility and the commercial divisions. In the UK a further division of BT into separate subsidiaries for the public

utility and commercial functions was created. In the USA the process of devolution went even further: here, an organisational divestiture of the Bell System was accomplished between the local monopoly of the Regional Bell Operating Companies and the commercial functions taken over by a deregulated AT&T. In some other countries government involvement became even more restricted by privatising the PTT organisation into a normal commercial enterprise.

Privatisation, as in the British case, was characterised by the sale of a majority of the shares of the former public enterprise to the private sector, a redefinition of the portfolio of the privatised corporation through separating its regulatory from its operational functions and subjecting its operational activities to a free competition regime. In the UK the public operator BT was privatised in 1984 and its assets were sold on the Stock Exchange between 1984-1993. The Dutch will follow the British privatisation example in 1994 and the French are preparing a balanced sale of a minority stake to private investors within three years. Although operating more at arm's length from their domestic governments, the French and Dutch PTTs still remain completely in government hands (at least temporarily). The complex discussions about corporatisation and privatisation in Dutch and French telecommunications have illustrated how and to what extent state and society are intertwined and how hard it is to separate the public and private sectors in the design of appropriate telecommunications policies. In these countries the national government continues to have an interest in the corporatised and the soon to be privatised PTT-administration.

After the recognition of corporate autonomy, the corporate transformation of the former PTT administration that would enhance market responsiveness and efficiency was the next step in the process of organisational development. Several re-organisation programmes were implemented to replace the hierarchical bureaucracy of the PTT administration, based on centralisation and functional and geographical divisions, by a more customer-responsive and commercial business culture and a decentralisation of activities and operational responsibilities. PTT Management became more responsive to the pressures from the market place as it was confronted with new demands from both traditional stakeholders, like the state and the user community, and new stakeholders, like (potential) financial investors and competitors. The increasing differentiation of user demand and intensifying competition meant that the former PTTs had to be equipped with more decentralised organisational structures in order to increase responsiveness, flexibility and innovation capabilities. With regards to balancing the needs of customers and coping effectively with the pressures from potential competitors and volatile markets, the functional and centralised bureaucracy was replaced by an M-form structure based on divisions and business units, that were closer to particular product markets, customer groups and/or regional areas.

The PTTs also became more and more fascinated by or even obsessed with improving efficiency levels. The ongoing process of de-nationalisation, from corporatisation to floatation, also required a slimmed down and market-driven organisation that could realise high performance objectives. A corporatised and

privatised PTT would be exposed to the pressures of its financial stakeholders and the capital market: the state would be interested in maximising the sale of its assets on the Stock Exchange and private and institutional investors would closely examine the performance ratios (sales and profits) and the distribution of dividends. In order to increase efficiency levels, the PTT corporation invested heavily in human capital, automation equipment and total quality management programmes. These measures surely led to an upgrading of the workforce, recruiting experts in informatics, systems developments, marketing and sales, and to a larger involvement and responsibility of personnel in taking business decisions. However, there were the negative consequences of the shedding of labour with an ever increasing number of redundancies, making the telecommunications industry even more capital intensive. The next step in the organisational transformation of the West European telecommunications industry was the process of vertical and horizontal integration.

The PTT companies diversified into the emerging markets of cable networks, cellular systems, equipment, services provision, software/computing, satellites, broadcasting & multimedia. In the search for control of these market, closely related to telecommunications sector, they were confronted with competition from the incumbents on these domains, like cable companies, cellular and satellite operators, information service providers, media conglomerates, that not only defended their position on these developing market segments, but were in turn ambitious about penetrating the PTT-dominated telecommunications market. The last step in the process of corporate evolution is the transformation of the PTTs and the telecommunications industry from domestically-based production and consumption (local for local) to international, transnational or even global patterns of economic organisation. Clearly, the former monopolistic telecommunications industry has become a world-wide oligopoly, in which national PTTs have established cross-border alliances (Concert, Unisource and Global One, previously known as Atlas/Phoenix) and are building up partnerships with equipment manufacturers, software/computing companies and service providers. The new corporate objectives refer to the supply of an integrated package of voice, cellular, data and videocommunications services to large and multinational users, based on one-stop shopping, full service provision and world-wide coverage.

Regulatory Reform

Most Western European countries are in a process of adjusting their national public monopoly to the new technological, economic and institutional conditions of international telecommunications. Although the degree of implementation will differ from country to country, the institutional framework seems to be characterised by a restriction of the public monopoly to the reserved transport services, the liberalisation of the markets for telecommunications products and services, (pseudo-)privatisation of the PTT-administration and (some degree of) economic regulation to guarantee universal service provision, reasonable tariffs, interconnectivity and fair competition. The European states and the European Community have left the traditional framework of a hierarchically organised and nationally-oriented regime, in which both the operation of the telecommunications service and the regulation of the

industry were the exclusive responsibility of the state-controlled PTT administration. After the PTT-dominated governance regime there seems to be a new post-interventionist framework emerging in Western Europe, inspired by American public-utility regulation, in which general anti-trust or competition policy is combined with sector-specific administrative agencies (i.e. the Federal Communications Commission dealing with the special features and conditions of the telecommunications industry). European states have embarked upon a regulatory trajectory, in which the regulatory and the operational functions of PTT are separated and the administrative tasks, dealing with safeguarding fair competition, interconnectivity and quality of service, are executed by the government ministry or by an independent administrative agency. In the Netherlands and France two ministerial departments, respectively HDTP of the Ministry of Transport and Public Works and DRG of the Ministry of Post, Telecommunications and Space have been exclusively assigned to supervise and regulate the telecommunications industry. The administrative structure implemented in the UK is made up out of two autonomous administrative bodies, one in charge of sector-specific regulation and the other in general competition policy, respectively OFTEL and MMC. Differences do exist between American public utility regulation and regulatory experiences in Europe: While in France and the Netherlands, the regulatory powers are located in the ministry, and in the UK they are located in the Director-General of OFTEL (cf. the USA: located in regulatory commissions operating independently from the relevant ministries). Furthermore, the American and national European regulatory systems differ in terms of their regulatory hierarchies and the price/revenue controls: two tiered and rate of return regulation in the USA, and single-tiered and price cap regulation in Europe.

The introduction of regulation, accommodating the interests of network operators, service providers, consumers and the economy as a whole, that replaced government intervention in the 1980s, is an illustration of the formalisation of government-industry relations in the telecommunications domain. In the former interventionist regime the various tasks (of utility operations, policy & rule setting and commercial exploitation were integrated within the state bureaucracy of the PTT. The recent differentiation and separation of these tasks, however, has clearly reduced the role of the executive and increased the role of a more autonomous PTT and private sector players. The task of commercial and utility exploitation has been farmed out to the PTO, reducing the role of the government to policy making and rule-setting. Although the emulation of the UK regulatory structure of politically independent agencies in the Netherlands and France are controversial, there is a general trend to separate the political task of policy formation from the administrative tasks of rule-setting, consultation and supervision. Such a refined structure based on a separation of powers, reduces political meddling and restricts the role of the government to the design of the general outlines, plans and institutional structures of the sector. Administrative regulation attempts to intermediate between market forces and state actions by the application and enforcement of public policy and the setting of rules through quasi-governmental agencies that operate outside the political domain.

The shift from an interventionist regime with direct state control and public ownership to a more distant and flexible governance regime with coordination through market forces and economic regulation seems to be highly difficult to manage from a government point of view. The governmental or independent administrative bodies were confronted with the structural problem of information asymmetry between the regulator and the regulatee. The latter had more sound information about relevant aspects of the telecommunications industry: the allocation of costs within the network, market conditions (standards, interconnection, prices) and future developments. In order to function effectively these independent regulatory agencies rely on expertise about the various aspects of telecommunications, the stipulation of exclusive concession and license schemes and franchise contracts and the application of general rules on competition, interconnectivity and public service provision. This process of information gathering, detailed contracting, rule application and the accumulation of jurisprudence contribute to a process of what has been called 'juridification' or 'legalisation' (Volcansek 1992a).

The European nation states were also confronted with the arrival of two new actors on the telecommunications stage. The process of European integration, which was propelled in the 1980s, meant the European Commission (through its general competition and telecommunications directorates) and the European Court of Justice were increasingly involved in the harmonisation of national policies and the design of a common European telecommunications market. The efforts of the Commission and the Court of Justice have clearly pulled telecommunications out of the political domain of the national governments and have been actively essential in redesigning European telecommunications under a more market-oriented regime, based on general anti-trust and mutual recognition rules to be supported by two-tier regulation at both national and EC-level. The Commission and the Court of Justice have become players in their own right with substantial jurisdiction and jurisprudence at their disposal: the two institutions have clearly contributed to the prevalence of EC-measures over member states' interventions and national practices. The Commission and the Court of Justice have also instigated a process of juridification (or legalisation) at EC-level by the creation of an expanding body of jurisprudence on the various aspects of European telecommunications. The actual implementation of these European directives and regulations into national legislation by the member states is a different matter, as the case of adopting the *Leased Line Directive* (92/44/EEC) shows. At present, the large majority of the member states has not yet implemented the essential requirements (minimum set of leased lines to be provided for each country, regulatory procedures for dispute settlement, application and cost accounting principles), as set forth in the directive, which is supposed to safeguard open network provision and market transparency (Sauter 1995).

7.6 *Concluding Remarks*

An explanation for this partial convergence of policy ideas and practices across Western Europe could be found in the increasing international dependencies between

the USA, Japan and Europe into an emerging world economy, restricting the freedom to pursue a strictly national policy. The international conditions restricting the scope for go-alone strategies, or more precise the American hegemony in telecommunications and computing, have to be taken into account (i.e. AT&T and IBM), by policy makers in Western Europe and Japan in the formation and implementation of adequate adjustment policies. The deregulation of the American telecommunications industry from the 1960s onwards instigated the leading telecommunications company AT&T and the leading computer supplier IBM to compete for market power and control in the developing market of telematics, integrating dataprocessing, computing, office automation, and telecommunications. Although it had to dispose of its local communications branches, AT&T was allowed to enter the markets of the dataprocessing industry and international services at home and the sale of equipment abroad. In terms of economies of scale, technological capabilities and experience with competition from new entrants in the domestic telecommunications services market (MCI and US Sprint), in equipment (GTE and Northern Telecom) and in the computing market (DEC, GE) AT&T and IBM were clearly ahead of their European equivalents. In the mid-1980s, the European telematics market was still organised at the member state level and divided among relatively small-scale telecommunications operators and the national champions of the computing industry, that were protected from foreign entry. Both the European telecommunications and computing industries, highly dependent upon state intervention through statutory monopolies, state enterprises, subsidies and public procurement, were very much concerned about a potential entry of the American giants, AT&T and IBM.

The established network of European stakeholders, made up of national governments, PTTs and their domestic equipment suppliers, were well aware of their delicate position *vis-à-vis* their powerful American counterparts and of the devastating consequences of a once-and-for-all liberalisation strategy. Therefore, they opted for a restrictive and gradual opening up of the protected national market and the Common Market. This would give the major stakeholders in the dominant coalition in Western Europe time to formulate an adequate adjustment strategy. The fear of American commercial, organisational and technological superiority and the threat of American domination of the European telecommunications market has manifested itself in the UK, France, the European Community, and to a lesser extent in the Netherlands. In the UK a link-up between BT and IBM to provide managed data services was not endorsed by the British government. Today, an ambitious BT seems to be inspired to penetrate the American market and to equal AT&T in size by linking up with its biggest domestic rival MCI. French telecommunications policy has been very much obsessed with the American challenge. Far-reaching government intervention and protection from foreign involvement in the reconstruction and modernisation of the domestic telecommunications industry was justified by at least three rationales, that were closely interrelated. The first sector-specific argument referred to the emerging telematics sector as an infant industry, that required state leadership to foster and orchestrate technological and industrial development. The second more general argument was based on the leading principle in French

industrial policy of reducing economic and technological dependence in the key industries and stimulating the autonomy of the French nation by supporting and building up a solid technological and industrial base domestically in the targeted sectors of electronics, manufacturing, nuclear industry, aerospace/aircraft manufacturing. The third argument refers to the propelling force of a foreign threat, which forces the French to safeguard the nation's interests. France's telecommunications policy between 1975-93 was to a large extent a response to the challenge of IBM and AT&T in telematics (the Nora/Minc Report), the Japanese threat in electronics and semi-conductors in the 1980s and the Anglo-Saxon bid for world hegemony (the global carriers BT/MCI and AT&T/Worldsource/Unisource), leaving France Télécom and the other European PTTs behind.

The attitude of the European Community reflects a combination of the French arguments, selectively supported by the British to support their domestic interests against American entry, and the free trade argument as laid down in the Treaty of Rome and reflected in the 1992 Internal Market Program. In the early 1980s a common European Telecommunications policy was developed in response to the American and Japanese domination in electronics, computing and telecommunications services. It was believed that coordination and collaboration of telecommunications policies at the EC-level would generate the economies of scale and facilitate the rapid innovation required to keep up with the American and Japanese competitors. However, the creation of the Common Market also constrained the leeway of the individual member states in the formulation of an appropriate response by setting restrictions on industrial policies, like precluding state subsidies, preferential treatment of national champions and statutory monopolies. The harmonisation of national commercial activities and market integration by the European Community fitted in perfectly with the American notions of trade liberalisation, justifying the search for access to the European market. For example, one of the big allies of the European institutions in the process of breaking down protective measures at national level and building up an Internal European Market, was American business, actively lobbying for international deregulation.

The Dutch also feared the entry of the large American firms, like IBM and AT&T, in their protected home market, but the situation in the Netherlands was less conflicting than elsewhere. Although the Dutch subsidiary of IBM played quite an active role in the representation of the interest of the information industry, the relationship between domestic incumbent firms like PTT and Philips Telecom and the penetrating American firms was less adversarial in the Netherlands than in France, the UK or the European Community. For example, the strategic partnership with Philips in APT, was the first strategic move of AT&T in Europe. In the early 1990s two more American-Dutch partnerships were (might be) established: the common effort of AT&T and PTT Telecom (together with the German and Danish PTTs) in modernising the telecommunications infrastructure in the Ukraine and the link up of Unisource (the joint initiative of the Swiss, Dutch and Swedish PTTs) and AT&T/Worldsource in 1994/95. This more pragmatic attitude of public and private stakeholders in the Netherlands towards foreign entry reflects the particular position of a small-sized and relatively open economy.

Although the United Kingdom was clearly ahead of France and the Netherlands in the timing and degree of implementing telecommunications liberalisation, the way in which the preserved markets were de-monopolised were quite similar: competition in the markets for terminal equipment and value-added services competition expanded only incrementally, not really touching upon the dominant stakes of British Telecom, PTT Telecom and France Télécom. After the new governance regime of market liberalisation and the corporatisation of the former PTT administration had been installed, it was clear that the former PTTs still had substantial informational and bargaining powers at their disposal, that hampered the effective functioning of the newly established regulatory framework. Therefore the need was expressed for more precise and specific rules that would balance the interests of consumers, business users, PTT, and national and foreign service providers more properly. The unequal distribution of power between a large and powerful regulated industry and a small-scale and inexperienced domestic regulator became less unbalanced with the implementation of detailed rule setting regarding tariffs, interconnectivity, fair competition, and quality of service levels. The domestic and international expansion of the former PTT-administrations as emerging diversified and multinational conglomerates was going beyond the control of the national regulatory framework.

Parallel with the trend towards detailed supervision and independent regulation at the national level, there was a comparable trend at EC level to match the powers of an internationalising telecommunications industry by more collaboration among the member states and supporting the growing importance of European institutions in telecommunications policy. The European Commission became actively involved in telecommunications regulatory reform through the increasing importance of its Competition Directorate in promoting general competition. It also initiated the creation of a loosely integrated federation of the member states' regulatory agencies that would deal with the harmonisation and integration of legal provisions and rules with the opening of various market segments, open network provision, standards and infrastructure development. The experiences with the liberalisation and privatisation of European telecommunications illustrate that effective regulatory reform not only presupposes de-regulation (the abolition of rules), but also require re-regulation by the implementation of new detailed rules to guarantee the exclusive provision of dedicated services, equal access and fair competition. The retreat of the state demanded in the domain of public utilities, like telecommunications, energy and railways, more sophistication over the definition of the remaining core responsibilities. The new situation created by the developments like liberalisation, privatisation and deregulation did not put an end to regulation but, paradoxically, required a process of regulatory reform in which the abolition of regulations was accompanied by the formation of new and sometimes more explicit or transparent rules. In such a new institutional environment the role of the government developed more and into that of trustworthy referee, putting the other roles of player/coach aside. Only recently this so-called 'paradox of regulatory reform' has been realised in the UK, the Netherlands, France and the European Community (Majone 1989b, 1994a,b; Veljanovski 1989, 1991a).

Although the state is still involved as key shareholder and regulator in the new telecommunications setting, the former PTT administrations have clearly become more independent from the civil service. The imposed governmental controls on investment decisions, personnel policy, social service provision, pricing, profits, horizontal and vertical integration and cross-national partnerships and so forth have been abolished or substantially reduced in order to increase the corporate autonomy and flexibility of the new PTOs. In the post-monopoly setting, characterised by market liberalisation, regulated provision of basic services and a more pluralist network, the PTTs have lost significant parts of their exclusive monopoly to new entrants like private carriers, service providers, and foreign telecommunications companies. To protect their *de facto* core monopoly France Télécom, PTT Telecom and British Telecom have decided to follow an expansionist strategy to integrate both vertically and horizontally. In order to defend their dominant position at home, France Télécom, British Telecom and PTT Telecom diversified into new profitable services like cellular communications (BT, PTT Telecom and FT), value added networks (FT, BT, PTT Telecom), global network services (BT), cable systems (PTT Telecom) and software & computing (FT), equipment manufacturing (FT and BT initially). The former Dutch, British and French PTTs also integrated horizontally by building up cross-national partnerships with other to increase economies of scale and seek access to new geographical markets. The strategic alliances between BT and the US-based MCI, the Global One joint venture of the French and German PTOs with the US-based Sprint, and the Dutch-Swiss-Swedish-Spanish link up with AT&T in Unisource/Worldsource are illustrations of the emergence of multinational or even global carriers. Telecommunications markets has become a volatile market in which both domestic and international competition is intensifying, leading to price instabilities, excess capacities and a trend towards further concentration.

Although the Dutch, French and British PTOs have lost markets shares, their bargaining power in the domestic equipment and services market is still substantial. The clear dominance of BT in nearly every part of the UK telecommunications market after almost ten years of drastic reform eroded only very slowly. The position of PTT Telecom and France Télécom *vis-à-vis* the competitors in their respective liberalised home markets is still unchallenged, resembling an offensively and defensively well-equipped Goliath against an emergent grouping of little Davids that have no common strategy or tactics. In France and the Netherlands the established interests of PTT Telecom and France Télécom were largely untouched: both in the traditional markets segments and the newly developing markets like cellular communications, data transport services, cable television and satellite services, market shares are still substantial. They have effectively delayed painful decisions that would allow for new entry by (potential) contenders or the creation of a level playing field. They opted for the step-by-step method of implementing fair competition. However, competition has been successfully introduced in emerging markets, where no hegemony by a powerful incumbent existed. For example, workable competition has been effectively established in the UK cellular market. A duopoly of BT and Racal Vodafone was established in the mid-1980s when the mobile communications market was still developing. After the further liberalisation

of the cellular market, the two incumbent were confronted with competition from two newly licensed operators, One-2-One (Mercury) and Orange (Hutchinson/Microtel). The contest between two players of equal strength, followed by competition from new entrants, has triggered innovation and market efficiency in the domestic mobile market, making it internationally competitive and facilitating the overseas expansion of UK firms.

8

Convergence and/or Divergence in European Telecommunications Restructuring ?

8.1 *Introduction*

Traditionally, telecommunications has been organised as a national affair in which central government, the telecommunications administration, and the equipment industry were sovereign in the domestic provision of equipment and services. When confronted with the current far-reaching technological, economic and international challenges, however, policy makers have become aware, that telecommunications can no longer be seen as a domestic affair with policies mainly oriented towards home markets and national constituents. The techno-economic rationale for a state-controlled monopoly has been eroded and the iron triangle of PTT, government and equipment manufacturer(s) has begun to lose political control. European states have started to reorganise their established telecommunications administrations and transform monopolistic markets to more open and regulated forms of competition. In this concluding chapter we will try to answer the following research question, namely *given that telecommunications is becoming increasingly global, is there any manoeuvrability left for European states in the adjustment of their domestic telecommunications polity, reflecting national actors and factors at the macro and industry level?* To answer this, a research framework has been introduced that allows for comparative examination of the strategic responses of three European countries - France, the Netherlands and the United Kingdom - to adjust their national telecommunications industry to the new techno-economic and international conditions between 1980s and 1994. These countries have been selected because of their generic policy response to economic crises, industrial restructuring and innovation, as found in the literature on comparative political economy and comparative government-industry relations.

The usual British strategy to industrial adjustment could be characterised by a market-oriented and company-led trajectory, that illuminates clear-cut liberalisation, deregulation and privatisation policies, arm's length relations between government and industry, and the pursuit of free trade strategies in the international domain. The characteristic French response to far-reaching structural changes in markets and technologies could be seen as a state-controlled adjustment strategy, in which the national government acts both as an entrepreneur and administrative guide in modernising the economy. To achieve the goals of enhanced efficiency and

innovation, the French government relies upon making large-scale infrastructural investments and manipulating money flows and ownership rights to rationalise its key sectors and establish national champions, while protecting the home market from foreign entry. Furthermore it strongly supports its national champions at the global level through strategic trade policy and active export diplomacy. The usual Dutch response to ruptures in the world economy and technological change is to emphasise the search for finding a trade-off between political and economic stability at home and international trade flexibility. The inclusive deals elaborately negotiated between public and private actors in the domestic realm and the collaborative practices in the home market, function as a springboard for the successful export of goods and services and thereby facilitate the international expansion of Dutch firms. In our comparative study we have investigated whether there was evidence of a typical Dutch, or French or British response to telecommunications restructuring, that would reflect the aforementioned approaches.

The responses of the chosen European states ranged between maintaining the established form of a core monopoly and state enterprise and carrying out of radical liberalisation, privatisation, and regulatory reform policies. In this study, it is argued that the individual policy response of each country is shaped by three independent variables to be found at different levels of analysis, namely the extranational variable of structural forces having an impact from the outside on the national telecommunications polity, a sectoral system variable including the composition of the domestic telecommunications industry of the three selected countries, and a national institutional variable accommodating extra-national developments with internal adjustments in the domestic telecommunications arena. The four *structural forces* of technological (r)evolution, newly emerging market patterns, international deregulation, and European integration, have effectively challenged the logic of a nationally oriented PTT system. An adaptation of the French, Dutch and British telecommunications sector to a new environment that is more dynamic, complex and uncertain, seems to be required. The *sectoral system variable* refers to the structure of the domestic telecommunications sector, and the strategic choices made by dominant actors and ruling coalitions in the market place and the policy arena. This variable addresses the economic and political strength of the former PTT administration or the new Public Telecommunications Operator (PTO) vis-à-vis its favoured supplier(s), its customers (i.e. large and residential users), its (new) shareholders and last, but not least, its (potential) competitors. It also includes the particular governance regime of the sector, that shapes the transactions and the strategic interactions taking place between the stakeholders. The *national institutional variable* refers to the persistent system of routines, codes of conduct and rules that both constrain the policy making process in the telecommunications domain and provide incentives to consider and act upon one particular set of strategies at the expense of any other alternatives. So national institutions set limitations on strategic behaviour and thereby constrain the feasibility of the various options and alternatives available to the stakeholders in the domestic telecommunications field.

This research investigates whether one can see the occurrence of convergent responses and/or divergent approaches to world-wide telecommunications

restructuring, pursued by the three selected European countries. Here we will deal with finding evidence in the European telecommunications domain for the proposition that *'the approach of various countries is becoming similar'* or for the opposite that *'country differences still matter in formulating appropriate policy responses'*. In comparative strategy and policy studies, this has become known as the convergence-divergence debate (see chapter 2). Stevens (1990) has applied the convergence/national diversity debate in the analysis of two opposing trends in the high-tech industries, that seemingly pose a dilemma for both national governments and (multi)national corporations; the choice between *techno-globalism* and *techno-nationalism*.

After a brief summary of the main findings of the country studies, we will move on to the concluding part of this comparative study. Here we will address the freedom of manoeuvrability available to the Dutch, British and French states to restructure their domestic telecommunications industry in the light of the new international techno-economic contingencies. Notwithstanding, the structural forces pushing for the adoption of converging and similar adjustment strategies among the three countries, France, the UK and the Netherlands could also follow distinct strategies, that might reflect different national policy preferences and further different domestic interests and strengths.

8.2 *The Impact of Structural Forces: A Convergence towards an Open and International Market?*

The governance regime of the European telecommunications industry has changed from a quasi-vertically integrated market structure centred around the national PTT monopoly, to a less protectionist and integrated regime, characterised by innovation, new entry, competition and open network provision (ONP). The telecommunications industry has for a long time been stable and well-organised with communication technology being fairly simple, and demand and supply patterns clear. Legislation centred on the conditions of natural monopoly and the concomitant notions of economies of scale, network integrity and centralised control. Policy formation was understood as a national affair, dominated by the rent seeking coalition of central government, the PTT administration, the national electronics champion, labour unions and consumers, all sharing in the network's costs and benefits. The established protectionist approach has effectively been challenged by the powerful 'outsiders' of the information-services coalition of computing firms and large business users. In order to increase efficiency and improve their organisational effectiveness, these companies demanded new entry and effective competition in the telecommunications market and the provision of specialised high-capacity services at low cost. The majority of national governments have prepared their domestic telecommunications sector for greater competition by liberalising equipment and services, hiving off the PTT to the private sector and separating postal and telecommunications functions on the one hand, and operational and regulatory activities on the other.

The new market-based regime, succeeding the traditional monopoly provision, can be characterised as dynamic and differentiated, offering new business opportunities,

for both the 'old' PTTs and their 'preferred' equipment manufacturers, and entry possibilities for new operators, service providers, and foreign suppliers. The coordination of economic activities changes from an administrative hierarchy, represented by the public operator and its monopoly, to a (more) competitive model, that allows free entry in the terminal equipment market, controlled entry in the services markets, alongside a persistent smaller or bigger 'core' public monopoly of the former PTT. Traditionally the operational and administrative tasks were integrated within the government apparatus (including the PTT administration), but from the mid-1980s a structural separation was implemented in Western Europe between the operation of telecommunications services and the regulation of the industry. The public operator's interference in regulation and standards-setting becomes more transparent with a privatised (or corporatised) PTT and the creation of (semi-)independent) regulatory agencies. Within the newly emerging institutional framework the character of government intervention changed from an 'interventionist', emphasising state monopolies, public ownership and planning, to a more detached regulatory role. European governments sought to introduce significant competition into the industry and to delegate administrative responsibilities to relatively autonomous agencies, responsible for scrutinising fair competition, price controls, arbitrating between the incumbent and new entrants (e.g. interconnection), and observing whether particular social objectives, such as universal service provision, were met. National public policies are now forced to include even transnational aspects of contemporary telecommunications; the entry of foreign firms to the domestic market, the (potential) behaviour of multinational business users, the ongoing process of European integration, the policy shaping role of international institutions (such as the GATT and the OECD), the strategies of overseas governments, transnationalisation through cross-border acquisition and strategic alliances, etc.

The nationally oriented telecommunications economies in Western Europe are challenged by (1) the impact of technological developments, (2) the emergence of global and differentiated communications markets, (3) increasing international deregulation and (4) European integration. These *four structural forces* (variable X1) press for change in the established telecommunications community, away from the heavily protected and politicised monopoly framework of public service provision and universal access to an emerging new model in which there is more room for competition, and foreign market participation and less government intervention.

The first challenge to the established PTT-system came from technological developments that led to alternative transmission technologies (satellites, cellular communications, cable networks) and the 'upgrading' of the core telecommunications infrastructure (high capacity broadband and software-based 'intelligent' networks) and to a plethora of value-added services. As a consequence, the traditional argument for a natural monopoly of the entire telecommunications industry was no longer valid and the reasons for active government intervention through a state-controlled PTT administration were eroded. Telecommunications has become more integrated with other business functions (like dataprocessing, office automation, industrial production etc.) on the basis of advanced computer systems. As a consequence, the

distinction between the public infrastructure and private business facilities has become blurred, especially when companies extended their information and engineering systems to privately developed telecommunications networks in order to meet their growing demand for bespoke applications and to cut back costs.

A second blow to the established system came from business and professional users who complained that their demand for low-cost, highly advanced and tailored service provision could not be met by a monopolistic operator and in a protected market. International users in particular effectively argued that the monopolistic control of the public telecommunications services and the restrictions on developing private alternative networks in Europe, were frustrating the strong demand for a new range of 'global' one-stop-shopping and seamless services. Large business customers, such as airline companies, financial institutions and car manufacturers, started to construct their own computer-based networks, connecting their subsidiaries, suppliers and customers around the world, and to manage their own datacommunications services. Other large international users relied upon specialised system integrators, including companies such as IBM, AT&T and commercially oriented European PTTs, to manage their corporate transactions and world-wide information flows.

A third reason for restructuring the national telecommunications polity in Europe was the challenge posed by the decision of the American government to deregulate its domestic equipment and services market. The US government had already started to question the characteristics of public service and monopoly provision of the established telecommunications polity in the late 1960s, and was gradually turning it into a market-oriented industry that would enhance efficiency and stimulate innovation and international trade. The loosening and lifting of government regulations would allow large vertically integrated companies like AT&T and IBM, relying upon a large home market and technology/market leadership, to become global telecommunications players. American business users in general, operating all over the world, would benefit from such a deregulated regime, which enabled competition between AT&T and IBM. Given US world leadership in both computing and telecommunications in the early 1980s, Japan and the European Union (EU) and its member states had to meet this challenge. At that time the EU consisted of comparatively small, fragmented and sheltered markets, which were becoming a handicap to innovation, growth and international competitiveness. Therefore the pro-market programme of the US government and the (potential) entry of American business into the European market posed a severe threat to the governments of the EU member states.

The fourth structural force that pushed for an overhaul of the established PTT-centred system was the process of European integration, i.e. the gradual transfer of legislative powers from national to European level of decision making. Challenged by the structural forces of technological developments, market differentiation and international deregulation, the United Kingdom - and the Netherlands to some extent - in the early 1980s embarked upon a three-fold policy: to liberalise the market, to privatise (or corporatise) the PTT administration, and to (re)regulate market

conditions and competitive behaviour. Other countries that were in the process of considering only marginal changes in the established regime (e.g. France), were surprised by the impact of the European Community's 1987 Green Paper and its subsequent regulations and directives to liberalise the telecommunications market and question the PTTs' exclusive rights. From the late 1980s onwards, the manoeuvrability of the member states of the European Community to protect their home market and further their own domestic interests, was curtailed by the ever-expanding jurisprudence at Community level, that took precedence over national legislation. For instance, the European institutions effectively contributed to a community-wide liberalisation of terminal equipment and value-added services, mobile and satellite communications, ensuring open access to public networks and structural separation between operating a network and regulating the industry. The most important measures will be the opening up of network provision (by 1996) and voice telephony (by 1998): they are currently being implemented within the legislative frameworks of the member states. The impact of EC legislation on domestic telecommunications policy making is substantial: although directives leave a certain degree of freedom to make national law commensurate with EC legislation, EC regulations and directives are binding upon each member state (in its entirety or in the results to be achieved, respectively.

All four structural developments, as discussed above, constrain European states in pursuing sovereign national strategies. Of course each country has its own selection environment of legal-institutional tradition, economic structure and industrial culture shaping national policies, but it appears that the manoeuvrability to follow an independent trajectory for a particular European country is increasingly contingent upon international pressures, global demands and technological opportunities that go beyond the nation state. Government attention has focused on opening up exclusive markets and orchestrating new institutional conditions. As a consequence, telecommunications is gradually losing its unique and idiosyncratic framework and is becoming more like a business activity, such as transport, retail and financial services industries. While there are still requirements for regulating market access, pricing, universal service provision and interconnection, European telecommunications policy has lost its immunity from the anti-trust provisions (as already laid down in the Treaty of Rome) and has become increasingly subject to generic competition policy. The industry also changed at the micro-level of the dominant corporation. The PTT administrations in the three selected countries were transformed from functional organisations to ones that have become more efficient and innovative. A new privatised and decentralised organisational form has allowed for the pursuit of market segmentation, product proliferation and price differentiation strategies (i.e. offering various products, serving different categories of users and introducing price flexibility), geographical expansion (through foreign investments and international strategic partnerships), strengthening customer relationships and account management, cutting costs and creating incentives for revenue enhancement and profits.

8.3 *The Impact of Domestic Actors and Institutions: A Divergence of Adjustment Strategies?*

In the domain of comparative political economy the three countries investigated in this study, the United Kingdom, the Netherlands and France, generally have been considered as having three different generic approaches for coping with the consequences of international and domestic industrial restructuring: a market-led or liberal response, a negotiated-led or corporatist response, and a state-led response. The usual British adjustment strategy represents a response in which the active promotion of entrepreneurship and competition in the home market and free trade and competitive deregulation in international settings are considered appropriate means to modernise domestic industries and strengthen the position of British firms in global markets. The Dutch response normally is characterised by a gradual adjustment of its established structures to meet the new demands of global industries and the new technological conditions by developing a common and consensual response, that includes the great majority of domestic stakeholders. In the case of France, the state has played a leading role in the economy by encouraging economic concentration of its key industries, by rationalising and fostering the creation of national champions, and by implementing large-scale and/or prestigious technological projects. In its strategic industrial and trade policies the French government relied upon a mixture of indicative planning, demand creation through ambitious public spending and procurement programmes, a state-controlled financial system, and the promotion of mercantilist policies, aimed at protecting the domestic industrial base by reducing imports and stimulating exports.

In this comparative organisational and institutional study these rather general notions about nationally different adjustment strategies have been investigated in the telecommunications domain. The study has revealed interesting material about the actions and reactions of France, the Netherlands and the UK to the same set of stimuli, posed by techno-economic and international changes in telecommunications between 1980-1994 (i.e. the dependent Y-variable). Some of the responses of these three countries to the new threats and opportunities were identical and converging, for instance, abandoning the traditional monopoly and replacing it with a more competitive model: others differed in the degree and timing of implementing structural change. In the early 1980s the UK was the first country in Europe to question the established monopoly regime and to embark upon a radical strategy of opening up the domestic market place, privatising the former General Post Office and establishing an independent regulatory structure separate from British Telecom and the Department of Trade & Industry, characterised by the Office of Telecommunications (OFTEL) and the Monopolies and Mergers Commission (MMC). The French and Dutch responses, implemented in the late 1980s, were strikingly similar. They both safeguarded the monopoly of the PTT on networks and basic services and introduced competition in the peripheral market of equipment and value added services and separated the regulatory and operational tasks of the PTT. But there were also differences between the two 'follower' countries; while the Netherlands and France adopted a more or less similar path of gradual market

liberalisation, the emphasis given to privatisation and regulatory reform by the French and the Dutch government differed. The Dutch gave greater priority to a gradual preparation and implementation of privatisation of KPN/PTT Telecom over establishing a transparent and independent regulatory structure. While the French government, relatively early on, established a semi-independent regulatory structure through the Direction de Réglémentation in the early 1990s, the notion of corporatising and privatising France Télécom was highly controversial and could not be carried out. The proposal to grant France Télécom corporate status was strongly opposed by the majority of its employees, fearful of losing their civil servant statute.

The process of cross-societal emulation also occurred: the duopoly alternatives in network provision and cellular communications as suggested and discussed in the Netherlands and France, clearly seems to have been inspired by the British experience. The strategy of the French government to create a quasi-vertically integrated telecommunications and electronics industry under state guidance (i.e. France Télécom) seems to have been inspired by the successful American Bell system before the AT&T divestiture of 1984. Another similar move made by the three domestic PTOs focused upon in this study, BT, KPN/PTT and France Télécom, was their link up with foreign operators through strategic alliances with American partners to ensure world-wide service provision. The Dutch KPN/PTT corporation joined forces with medium-sized PTOs from Sweden, Switzerland and Spain to form Unisource, and with the American giant AT&T, through the Uniworld venture. BT linked up with the second American long-distance operator, MCI, in the Concert joint venture. France Télécom joined forces with the Deutsche Bundespost Telekom in the Atlas consortium and the third American long-distance operator, Sprint. Also contrasting decisions were taken: for instance, while the Thatcher government pursued a radical privatisation and deregulation strategy aimed at enlarging the role of market forces throughout society, the Mitterand/Mauroy government launched an ambitious nationalisation path to bring key industries under state leadership.

The United Kingdom was the first country in Europe to give political weight to the new 'de-monopolisation' paradigm when it ferociously implemented a new governance regime in the domestic telecommunications sector, characterised by a privatised operator, a liberalised market (varying between controlled entry in network provision to free entry in services and equipment) and the creation of OFTEL as an independent regulatory agency to ensure political objectives like quality of service, tariff setting and fair competition. The driving forces behind this radical restructuring strategy were the Thatcher and Major governments with their pro-market and anti-government creed, and the large business users, who demanded more advanced, efficient and customised communication facilities. The Netherlands and France were well behind the United Kingdom in adopting the new governance regime: more than ten years after the British Government had privatised BT and established a market duopoly and the OFTEL agency, the Dutch and French governments started seriously to consider network and voice competition. Not until 1994 did the Dutch float a first tranche of KPN/PTT and the French are preparing for privatisation of France Télécom in the near future.

Despite the striking differences between the dates of introducing competition in the core markets of infrastructure provision and voice telephony between the United Kingdom on the one hand and the Netherlands and France on the other, the divergence in market liberalisation is significantly less in the domain of peripheral equipment, cellular services, value added networks, enhanced services and global service provision. In these 'fringe markets' the picture is more varied: Britain was the first to liberalise mobile services and value-added networks, France was the first to have a relatively open market for peripheral equipment and tele-information services and the Dutch PTT was the first to commit itself to a strategy of international partnering by linking up with the Swedish, Spanish and Swiss PTTs, in a cross-national alliance called Unisource that, together with the AT&T-dominated Worldsource federation, provides global one-stop shopping services for multinational businesses. In 1993, the Netherlands started to discuss and prepare the establishment of a transitional duopoly in the voice telephony and infrastructure markets between the incumbent PTT, the potentially powerful Enertel/NS-consortium of local cable operators, and alternative regional and national network operators. Albeit the first on the European Continent to consider the two-stage implementation of full competition, the country lost its lead when these plans proved more difficult than expected to implement. Major disagreements between the constituents about which strategy should be followed and the persistent impact of the four structural forces mentioned above facilitating new entry and more effective competition, seriously questioned the feasibility of putting into place an interim regime.

Britain's lead in the implementation of a market-oriented governance regime and its concomitant experiences with new structures is not a measure of its leadership in the European telecommunications industry. The results of the restructuring in Britain are mixed. BT was fully privatised, rationalised and transformed into a profit-driven company, serving the interests of its domestic, and international customers and stockholders. As a result of the pro-market policies of the Conservative Thatcher/Major governments, new operators providing alternative network services have entered the UK market and effectively contributed to making it one of the most liberal telecommunications markets in the world. Furthermore, a new administrative structure was established, consisting of industry-specific regulation carried out by the independent OFTEL body and transsectoral competition policy through the MMC and OFT watchdogs. Nothwitstanding its unrivalled degree of innovation and structural reform, the framework of British telecommunications has several shortcomings. The incumbent, BT, which was left integrated (some of the policymakers originally wanted a divestiture like in the USA), clearly dominated the domestic telecommunications market. Furthermore, the cut back of BT's workforce by more than 40 per cent has generated substantial social costs, the charges to residential users have gone up (while BT keeps making huge profits), the domestic manufacturing base has been eroded, and there are complaints about the lack of political accountability and transparency of the newly established regulatory system. In the 1970s and 1980s, France carried out an impressive upgrading of its then backward network and effectively caught up with its German and British competitors. In some domains, it even overtook them, the French

telecommunications network, for instance, is one of the most advanced in the world and in the switching equipment market its carefully nurtured national champion, Alcatel, has become a world leader. The French government has established a solid and autonomous industrial and technological base with Alcatel and France Télécom now successfully expanding outside France.

The Dutch followed the opening of the British telecommunications market closely, but did not consider implementation of full-fledged liberalisation and privatisation feasible, given their conflict-ridden and radical character. After a broad investigation and intensive political discussion in preparing the new legislative framework of 1989, the Dutch pursued a gradual restructuring strategy to achieve liberalisation of the market and the privatisation of KPN/PTT by 1998. Compared to the UK and France, where the telecommunications and postal branches were separate, the Dutch PTT remained integrated through a holding, that was partially privatised in 1994. Like France to some extent, the Netherlands was relatively slow in taking regulatory reform seriously: it sought to establish gradually a transparent administrative framework, that would both facilitate and control competition in the core market segments and safeguard the public interest. Initially, political support for the public monopoly model was strong and regulation was at arm's length from the PTT. Clear priority was given to an even development, in which the PTT and government respectively would be given sufficient time and space to restructure and to build up the skills required to operate in a more commercial environment, and to accumulate regulatory knowledge and administrative capabilities. The interests of new (or potential) market players and business users were sacrificed for the more important ones of the national champion and its patron, in order to facilitate the restructuring and international expansion of KPN/PTT and to prepare its eventual flotation. The meticulous plan of the Dutch government to privatise only in the mid-term was to allow top management and staff sufficient time to adapt to competition and achieve the Treasury's objective of maximising the proceeds from the flotation.

The French followed a 'catching up' approach, aimed at strengthening the position of the domestic telecommunications industry both at home and abroad through the pursuit of interventionist industrial and trade policies. The strategy to close the technology gap with the market leaders relied upon a critical assessment of the longer-term trends in the national economy, international trade, and the search for 'a window of opportunity', temporarily created by technological innovation and the opening of new markets (Perez & Soete 1988). This scanning process was followed by decision making concerning the priorities for economic development (i.e. the allocation of government subsidies), the timing of entry into new technology systems, and the formation of collaborative arrangements between the core firm(s) and related and supporting industries. The implementation of these state-led strategies was achieved through indicative planning, the (selective) use of entry barriers to the domestic market, credits provided by state-controlled financial institutions, and ambitious state-sponsored public works (i.e. network modernisation, Transpac, Minitel, Plan Calcul), carried out by privileged domestic companies. After a large scale introduction in the domestic market, the French government vehemently pushed for the export of these technologies and the international expansion of these 'national

champions' through the granting of export subsidies, trade diplomacy and strategic trade policy, and striking international strategic alliances.

This mercantilist strategy proved relatively successful in the modernisation of the French public telecommunications infrastructure in the 1970s and the development and diffusion of new networks and Minitel-services aimed at the consumer market. It also contributed to the effective restructuring of the domestic equipment industry by the combined nationalisation and consolidation of the various medium-sized suppliers into the envisaged 'national champion' CGE/Alcatel/CIT, that in the mid-1980s became a world player with the acquisition of the telecommunications branch of ITT. The French strategy proved less successful in the more dynamic markets of advanced services, provided at home or delivered around the globe, for large business users. For instance, France's strong commitment to Minitel, because of the heavy investment outlays in network and equipment technologies in the 1980s and nation-wide diffusion of Minitel services, might constrain the take up of more advanced and globally available Internet services. Compared to the early internationalisers of BT and the Unisource-participants, France Télécom, besides some international activities in 'targeted' technological areas and former French colonies, was relatively late in establishing strategic links with international partners to join the exclusive club of global carriers. One reason for the lack of commercial skills and strategic flexibility seems to be related to the semi-corporatised status of the telecommunications company, the strong resistance to change within France Telecom and the persistent patronage of the Treasury. Furthermore, because of the above-average performance levels in French telecommunications, neither economic nor political demand for full-speed liberalisation were strong. The plan of the French government for the corporatisation and privatisation of FT/DGT in 1986-88 and 1993-94 was strongly opposed by its *Corps* of engineers and regular staff, afraid of losing their civil service privileges and anticipating job cuts.

In short, the national responses in Western Europe to restructuring the telecommunications industry were both convergent and divergent. Challenged by the same set of stimuli, consisting of the four structural forces, pushing for a reconsideration and adjustment of domestic markets to the new techno-economic, international and European conditions, the United Kingdom, the Netherlands and France realised that the traditional monopoly/hierarchy regime was no longer viable and institutional transformation was necessary. They all embarked upon a search for new ways of defining the problems and solutions of the telecommunications sector and implementing legislative adjustments to allow for corporate autonomy of the former PTT, the promotion of (controlled) market entry and competition, the retreat of the state, and new forms of regulation. Along with the similarities found in this study between the three countries, *the timing and degree of implementation of structural reform measures* varied between France, the United Kingdom and the Netherlands. Briefly, the differences could be subsumed under the headings of Anglo-Saxon competition and Continental monopolies.

The 'first-mover' strategy of the British to carry out both privatisation, liberalisation and regulatory reform (i.e. combining deregulation with re-regulation)

in the early 1980s, was followed by a more patient and less radical approach by the Dutch and the French. Besides the neo-liberal ideology of private enterprise and free trade of the Thatcher Government, the British response was influenced by the notion of strengthening the comparative advantage of the domestic services industry and attracting economic activities from abroad, such as foreign investments and telecommunications traffic. The 'second-mover' strategy of the French and the Dutch included a more integrated approach to reinforcing the country's industrial/technological base by finding a 'trade off' between economic objectives and socio-political concerns over safeguarding universal/public service obligations and maintaining employment levels. In France and the Netherlands policy makers attempted to combine the persistence of a state-controlled monopoly on infrastructure provision and voice telephony with the promotion of competition in all other market segments. The process of finding a compromise between these various objectives gave way to a lengthy and time-consuming process in which liberalisation, privatisation and regulatory reform measures were implemented one at a time, to ensure social and political stability. While the British opted for a trajectory of 'creative destruction' that emphasised the overhaul of existing technologies, markets and regulations, the Dutch and the French chose the path of socially acceptable competition, in which government would intervene selectively to protect the vital interests of national stakeholders and control domestic markets to accomplish socio-political goals other than open competition and free trade. Although relatively similar to the British strategy, the policy responses of the Dutch and the French diverged completely on the issue of corporatising/privatising the telecommunications administration, and to a lesser extent on the issue of establishing a new regulatory structure. While in France little support existed for privatisation but there was enthusiasm for carrying out regulatory reform measures, the situation in the Netherlands was the reverse. There the implementation of privatisation of the Dutch KPN/PTT caused no major tensions, while the issue of establishing a more transparent regulatory structure independent from both the central government and market players, received little substantial political backing.

8.4 *Explaining Converging/Diverging Adjustment Policies: Domestic Ruling Coalitions and Institutional Constraints*

We have found evidence that national strategies still matter in the formation and implementation of more-competitive telecommunications policies between 1980-1994. The UK with its governance regime, characterised by market-led adjustment and a relatively open and pluralist political system, has implemented liberalisation, privatisation and regulatory reform policies more fully and more speedily than the Netherlands and France. The neo-corporatist approach of the Netherlands followed international developments haphazardly. It was only after elaborate and time-consuming negotiations between all the parties involved that they could impose modest reform measures. The French statist regime has so far responded only selectively to the international market and regulatory developments: government intervention aimed at securing national interests by sheltering the home market,

stimulating domestic innovation in key technologies and supporting the international expansion of its national champions. On the basis of the country studies, we can distinguish between the first-mover strategy of the UK, the follower strategy of the Dutch and the catch-up strategy of the French government. In the research framework we have recognised that a country's particular response to international techno-economic restructuring (X1-variables) is shaped by the strategies of key actors and constellations of interests at the sectoral level (X2-variables), and institutional 'filters', that (pre)select certain issues, arrangements and policy paths, herewith excluding others (X3-variables). Institutional conditions at national level, such as specific national endowments, the positioning of the state in the economy, systems of interest intermediation, dominant economic ideologies and their embeddedness in the world economy, restrict the manoeuvrability of actors in the telecommunications policy arena.

The first explanation for the - to some extent - varying responses to global and techno-economic restructuring between France, the Netherlands and the United Kingdom refers to the strengths and the weaknesses of the domestic ruling coalition and the overall composition of the sectoral configuration. If we look at the distribution of political and economic power in the three countries, three different pictures emerge of the ruling coalitions that formulated and implemented their telecommunications policy.

The dominant coalition in the UK included the large telecommunications users who found political access and support for their demands to introduce competition and improve efficiency and quality of service, and Conservative party officials, who strongly pushed for radical economic changes by *'getting the government off the backs of the people'*. The financial services industry, located in the City of London, also benefited from the various business activities generated by privatisation. This alliance of neo-liberal or 'Thatcherite' politicians and the services industry extended to include the floated British Telecom, the newly established industry regulator, OFTEL, and new entrants, such as Mercury/Cable & Wireless, Vodaphone and cable operators, all of whom have contributed modestly or wholeheartedly to the establishment of the new market situation. The stakeholders that were not included were the unions, residential consumers, the Labour party and the domestic equipment manufacturers. Their demands for more collaborative and socially responsible labour relations, lower tariffs, re-nationalisation of the public utilities and protection for the domestic manufacturing base, were not met.

The UK was one of the first countries to adjust its telecommunications regime to new techno-global market conditions. The restructuring of UK telecommunications started with the publication under Labour of the 1977 Carter Report which envisaged a separation of the postal and telecommunications services located within the General Post Office, the consequent corporatisation of British Telecom and limited liberalisation of the terminal equipment market. Successive Conservative governments went even further with the adoption of far-reaching policy measures like the liberalisation of services and equipment, infrastructure competition, privatisation of BT and detailed supervision by the independent regulatory agency,

OFTEL. Already by the mid-1980s the UK had implemented a new governance regime, that even in 1994 was too radical for the other West European countries. The drastic reform programme of the Thatcher government was inspired by the ideology of a neo-liberal government, strong demand for high-quality, low-cost telecommunications by large business users in the City of London, and the poor performance of British Telecom. The early adoption of these stringent reforms gave the UK business community a clear competitive advantage over less-innovative followers, like the Netherlands and France. As a consequence, the London-based services industry has strengthened its position *vis-à-vis* other world centres, and domestic competition and privatisation have revitalised the two 'sleeping giants' of UK telecommunications, the domestic telecommunications administration Post Office/British Telecom and Cable & Wireless/Mercury (a state-owned operator active in the Commonwealth) into two leading global carriers. Also, multinational users have benefited from the low charges for international transmission and data services in the UK by rerouting their traffic through the 'hub' of London and/or locating their telecommunications centres in the UK.

In the Netherlands, the dominant elite included the vast majority of stakeholders, all of whom participated in the process of finding compromises between liberalisation and persistent monopoly markets, privatisation and government administration, and (self)regulation and political interference. Consensus was reached after lengthy bargaining and technocratic solutions provided by non-political advisory committees and consultancy companies. The preferred institutional structure included a privileged corporatised PTT and an administered market comprised of a core monopoly and liberalised fringe markets. These collaborative arrangements were supported by the majority of the stakeholders in this near-inclusive coalition; however, such package deals were regularly challenged by the European Commission, and new market entrants (cable companies, foreign operators and cellular operators). Unlike the UK, which was well ahead of the other European countries and the European Community in establishing an open and competitive telecommunications market, the Dutch and the French government found themselves regularly under pressure from the Commission to liberalise their home markets further, to give up the exclusive rights of their domestic operators, and eventually to establish a level playing field characterised by open entry and fair competition.

Originally the Netherlands had followed the restructuring process in the UK with great interest and as an early adopter clearly benefited from the British experiments. The Dutch began to examine structural changes in the international telecommunications market in the early 1980s. Several *ad hoc* government committees were appointed to propose policy alternatives to the established public monopoly regime. In these official reports and in ensuing parliamentary discussions, Dutch policy makers often referred to the deregulation and privatisation programmes in the UK and the USA. The UK case had generated numerous learning effects that were helpful in the design of a new telecommunications polity in the Netherlands. Furthermore, the *mission-oriented programme* of the UK government, glorifying the 'creative destruction' of entrepreneurship, innovation and market dynamics and aiming at giving Britain a lead in the information technology and services domain,

provided an exemplar to the Dutch who simply avoided such a revolutionary model. Compared with the UK 'Big Bang'-scenario, the Netherlands, followed a 'many little bangs' strategy to transform its domestic telecommunications regime and very gradually, and this effort finally lost momentum in the late 1980s. Between 1981 and 1986 the Dutch drafted a new telecommunications framework that attempted to strike a balance between the traditional public monopoly model and the radical British scenario. After lengthy negotiations, leading to the new 1989 Telecommunications Act, the Dutch were convinced they had sufficiently addressed the emerging techno-economic and international challenges.

The Dutch path, however, also had disadvantages. The *diffusion-oriented* strategy was handicapped by the complex accommodation of interests in Dutch politics and the time-consuming character of consensus-seeking in the telecommunications policy domain. The focus on balancing internal stability to meet external challenges led, in the Dutch case, to a search for acceptable compromises among domestic stakeholders about the outlines of a common national policy and the consequent meticulous drafting of more adequate legislation. For instance, the Dutch 1989 Telecommunications Act was a kind of 'one law to fit all' at that time: it struck a bargain between modest liberalisation and preservation of the PTT privileges of the past, effectively meeting the demands of the PTT, the large users, the union representatives, the consumers, and the equipment manufacturers. The one-sided attention in the policy process on domestic pacification and the drafting of once-for-all legislation had the perverse result of overlooking or excluding major ongoing structural developments, like technological progress, European integration and globalisation of the business environment. This policy lag came to the fore when the newly-established telecommunications framework could not cope with the requirements of the European Commission on cellular radio, satellite communications and data transmission, and the envisaged full liberalisation of the European telecommunications market before 1998. The effects of rapid technological innovation, ongoing market differentiation and European integration upon the newly established framework were underestimated, making the 1989 legislation obsolete within five years.

The dominant ruling coalition in France was clearly state-controlled: it included central government clearly guiding the country's key industries and the close circles around the core ministries including such semi-corporate companies as France Telecom, the national public R&D institute for telecommunications, CNET, and the private national champion, Alcatel. The role of large telecommunications users in France was not as influential as in the UK (or to some extent, in the Netherlands). The reason for this was threefold: the lack of centrality of the services sector, the dispersed organisation of large users and the more than adequate performance levels of France Télécom. First, the domestic services industry is less substantial in the French economy and less internationalised than its British counterpart. Secondly, French business had only minor complaints about the performance and quality of the service of France Télécom (unlike the TMA, speaking on behalf of large British users, who heavily criticised BT's poor quality service in the late 1970s and early 1980s). Thirdly, compared to the highly professional TMA in Britain, large

telecommunications users were less well organised and not fully aware of the costs of telecommunications services. The relationship between central government and France Telecom is close but also contentious: still fully state-owned, France Telecom is regarded by the Treasury as 'the goose that lays the golden eggs' and by the Ministry of Economic Affairs as vital in shaping and carrying out its high technology policies. The relationship between Alcatel, CNET and France Telecom has been quasi-hierarchical with the companies working together under state sponsorship, in rationalising the industry, coordinating research and development and the joint efforts of exporting technologies. Another link pin between these companies is the shared educational background of engineers and civil servants at elite schools, their consequent *esprit de corps* and the flow of staff between central government, CNET, France Telecom, Alcatel and other French state-controlled companies.

In France, national government followed a clear interventionist strategy, in which France Telecom/DGT was given almost exclusive responsibility to design a competitive information and telecommunications industry. The French government has allocated number one priority in its industrial policy to the development of an advanced 'high tech' electronics industry. Long before the nationalisation programme of the 1981 socialist/communist Mitterand/Mauroy government, DGT/France Télécom had been actively involved in the modernisation of the French public telecommunications network and the promotion of new telematic services, while the domain of terminal equipment was left to market forces. After nationalising the domestic equipment industry (Thomson, CGE/Alcatel and the subsidiaries of ITT), the French established a kind of equivalent to AT&T, a *France Telephone & Telegraph* (FT&T), based on a horizontally and (quasi-)vertically integrated telecommunications monopoly, including R&D, network operations and equipment manufacturing. While, in the early 1980s, the majority of Western countries examined, considered or even implemented telecommunications deregulation, liberalisation and privatisation, France established a state-controlled telecommunications sector, that protected the domestic industry from the forces of international competition. However, this 'shelter' or 'go it alone' strategy of the French was partially abandoned with the shift in government in 1986 from the left to the right. The Chirac-Mitterand government carefully adjusted French industrial and telecommunications policies to the demands of the international economic environment: the equipment industry was (partly) re-privatised and the corporatisation of DGT/FT was prepared. It received strong internal opposition throughout the DGT, and the plan was postponed. When the socialists returned to power in 1988, the more ambitious plans to privatise France Telecom and to liberalise the market further were moderated, leading to a semi-corporate France Telecom and a structuring of the domestic market that met the minimum requirements of EU-legislation.

Besides the distribution of power in the political economy of telecommunications in the three countries, another important factor in explaining the degree and timing of adjustment were the institutional contingencies at the national level (see chapter 2). These variables to some extent constrained the policy making process by setting limits upon strategic behaviour (restricting the availability of alternatives and

selecting those that were feasible), but they also provided incentives to follow established routines, rules and persistent patterns of interaction. These institutional variables, as borrowed from Gourevitch (1986), included: the production profile, the composition of the political system and the role of the state, the system of interest mediation, the established approach in industrial and economic policy, and the embeddedness and the positioning of the national economy in the international system. One could consider the negotiated Dutch approach, the *dirigiste* French policy style and the British market-inspired strategy as path-dependent, reflecting particular traditions, inherited capabilities and persistent ruling coalitions, that together, shape a country's economic and political conditions. Normally, institutional development will have a gradual, step-by-step character. For instance, policy development in Dutch telecommunications was path-dependent and critical shifts did not occur. Industrial performance was never really below average, the majority of the stakeholders found their political demands to some extent honoured and the consensualist system was not actually questioned by any of the players. Only in extreme circumstances, triggered by economic shocks and radical political swings, might 'revolutionary' trajectory shifts occur. In such extraordinary cases, new political and economic groups might come to power and the community of policy makers might have to be reshuffled to improve performance levels and to accomplish society-wide infrastructural or ideologically-driven projects.

In a market-oriented society like the UK, the creation of a more open telecommunications market, complemented with regulation to protect the public interest, fitted into an inherited pattern of finding solutions to economic problems through the mechanisms of free markets and international competition. As well as relying upon these inherited market-based practices and a traditional hands-off relationships between government and industry, the British also could draw on comparative experiences in the transformation of related infrastructural sectors (such as energy, airways, water, etc.) to install new governance regimes based on market regulation. The availability of routines, competencies, and experiences, that had proved effective in practice, is one explanation why the British adapted so smoothly to the new techno-economic conditions. Both the Dutch and the French were constrained by the institutional disadvantages of their regimes to adapt to market-oriented telecommunications. Given their traditions of close government-business exchange patterns and a social market economy, and hierarchical government-industry relationships and state-controlled key sectors of the economy, respectively, the Dutch and the French systems seemed to lack the prescribed ways of thinking and the necessary skills to consider and implement such a new governance regime. While the British gave up the dominant techno-economic paradigm of the natural monopoly argument and embraced the new model of regulated competition relatively quickly, a large majority of the Dutch and French policy communities ignored the anomalies in the established governance regime and continued to perceive things in a conservative way. It was only in the early 1990s that a growing number of stakeholders in both France and the Netherlands became aware of the revolutionary shift that was taking place in telecommunications. In the politicised and less dynamic equipment market, however, the reputation of the French was, and still is, outstanding, as furthered by

inherited engineering competencies, public procurement, acquired scale and scope advantages, and trade diplomatic skills.

The occurrence of path-dependent developments, interrupted incidentally by critical junctures challenging the *status quo*, was particularly relevant in explaining some of the breakthroughs in French and British telecommunications policy. At the end of 1960 French policy makers, already convinced about the strategic character of information technology and its positive effects upon national productivity levels and economic growth, were confronted with the need to overhaul and modernise a technologically backward and inefficient telecommunications system. The modernisation of telecommunications in France became a target in the national indicative planning system and subsequent interventionist industrial policies, envisaging *Frenchified* technology and the promotion of a national champion (i.e. curtailing the leading manufacturer ITT), the granting of subsidies and public procurement contracts by government and the coordination of R&D and overall guidance by state enterprises and public research institutions (i.e. DGT and CNET). At the end of the 1970s, it became clear that the UK telecommunications system needed to upgraded and reformed. The large users in the City complained about BT's poor service provision: an underperforming network and an operator lacking a commercial orientation. The coming to power of Thatcher's Conservative party attacking loss-making and inefficient state enterprises, dealt another blow to BT and the established monopoly in UK telecommunications. In the end this led to the privatisation of BT and the establishment of managed competition, based on a network duopoly, liberalised equipment and services markets and regulatory surveillance to ensure quality of service and fair play. In the early 1980s the French DGT had already caught up with its international contenders, merely as a result of the policies of central government targeted towards the electronics industries. By that stage DGT was not as vulnerable as BT: it had been strongly involved in the large-scale modernisation of the French network and had strengthened both its direct and indirect control over the domestic telecommunications industry.

The institutional variable of the production profile on constraining or spurring policy development especially manifested itself in Britain and France, where the performance level of their domestic telecommunications industries was far below average and outstanding, respectively. In Britain the poor level of service in the Post Office/British Telecom and the funds needed to upgrade the network acted as major incentives for large business users and the newly-appointed Thatcher Government to consider the shock therapy of privatising British Telecom rapidly and carrying out a radical market liberalisation programme. High quality information services at low cost were extremely relevant to the internationally competitive services industry in Britain. In France, the economic position and the political strength of the services sector was not as great. Here emphasis was laid on equipment manufacturing and industrial engineering. The poor condition of the public telecommunications network in the 1960s motivated the French government to give first priority in its planning activities to upgrading the domestic infrastructure. Furthermore, France Telecom was given a special role in carrying out industrial/technological policy. It was responsible for orchestrating the process of catching up with the major international contenders in

the electronics domain. After this highly successful modernisation of the French network in the 1970s and 1980s, there was no need for drastic changes to the domestic framework: why embark upon a risky privatisation and liberalisation trajectory if the technological performance levels of France Télécom were already worldclass? Thus a particular production profile in the domestic economies and in industry can influence the state to leave things as they are (e.g. France) or can spur public and private actors to transform the existing situation (e.g. the UK).

Another institutional factor explaining to a degree the path taken by the three countries involved in this study, is the composition of the political arena and the role of the state. While the Dutch system is characterised by proportional representation and coalition governments, searching for society-wide compromises, consensus and continuity of policy development (i.e. controlled liberalisation and privatisation), the British and French polities exhibit more adversarial traits and 'winner takes all' practices. The parliamentary duopoly of the UK and France, relying upon strong cleavages between left and right, and the tradition of majority rule, allows not only for more radical party manifestos and political debates but, more importantly, for direct implementation of these politically sensitive proposals to (de-)nationalise, thereby overruling the opponent's point of view. For instance, the electoral victories of the right-wing Thatcher government in 1979, the leftist Mitterand/Mauroy government in 1981 and the replacement by the Chirac-Mitterand government between 1986-88, were sea changes compared to the previous incremental policies in post-war Britain and France. In the UK, Thatcher embarked upon a radical deregulation and privatisation programme that was effectively carried out in the subsequent decade. In France the socialist/communist government launched an ambitious nationalisation programme, bringing the majority of the large companies and the country's key industries under state control. Despite the socialist presidency of Mitterand, these interventionist measures were undone by the liberal-conservative Chirac government (1986-88) and the Balladur government (1993-94), which strenghtened the private sector by de-nationalising a substantial number of state enterprises. The practice of state leadership and administrative guidance of the critical sectors of the national economy was not abandoned however; the strategic position of France Télécom was not affected.

The role of the state in restructuring telecommunications is different in each of the three countries investigated. The French approach was a clear illustration of a developmental state, when the state combined the role of demiurge and husbandry. The French state was actively involved in the domestic telecommunications industry in a variety of ways through sponsoring departments, state enterprises and affiliated businesses. First the French government acted as the guide to telecommunications restructuring by nationalising foreign firms and rationalising domestic industries and as the sole producer of strategic goods and services to secure strategic industries and technologies under centralised control. Secondly, the state acted simultaneously as entrepreneur (developing new markets and taking risks) and financier (providing and facilitating funds and credits). Finally, the state acted as intermediary between the various interests and stakeholders and as the gatekeeper to the French market, attempting to stimulate exports and selectively reduce imports.

The role of the UK government could be characterised as regulatory, in which the government combined the functions of custodian and midwifery. The British state withdrew from its active involvement in domestic telecommunications by abandoning its role as producer, entrepreneur and (co-)financier and giving more emphasis to the continuing role of arbitrator or referee, acting as an administrative watchdog overseeing the liberalised and privatised industry. Thus the hierarchical relationships between the state and industry was transformed into a contract-based principal-agent relationship, the state being the principal and the market players the agents. The British government took its role as regulator seriously and set up OFTEL as an independent body to stimulate fair competition, investigate anti-competitive practices and ensure that socio-political objectives were met. Through this rule-setting approach the British government stimulated new entry in nearly every segment of the telecommunications market, thereby facilitating the domestic and international expansion of BT, the 'birth' of new successful firms such as Vodaphone and Cable & Wireless/Mercury. It also allowed foreign entry of large American and Canadian companies that linked up with smaller domestic cable and telecommunications operators.

Compared to the relatively strong state of France and (to some extent) the UK, the position of the Dutch government vis-à-vis its stakeholders was less hierarchical. The role of the Dutch state in telecommunications policy was that of middleman or broker attempting to strike deals and to forge consensus on future policies that included all the major stakeholders. It was able to mediate controversial issues and conflicting interests with acceptable comprises through a prolonged process, thereby avoiding more radical adjustment strategies that would bring about rapid and disruptive changes, that could damage some of the stakeholders in the policy process. In the early and mid-1980s the Dutch strategy of incremental adjustment was relatively effective. However, in the early 1990s, when the full impact of rapid technological change and market developments and the effect of European integration acting upon the carefully reached compromise of 1989 was felt, the handicaps of the Dutch negotiated and consensualist approach became obvious. The Dutch government now faces the problem of planning and developing a new path for the future, taking advantage of new technological opportunities, contending with political and economic conditions, while the Dutch state and some stakeholders are still stuck in the traditions of the past.

The third institutional factor which helps to explain the different trajectories followed by the three states is the system of interest intermediation. We have discussed the 'public' element of state-society exchange relationships, now we move to the private side of stakeholders and interest groups also influencing the policy process. To some extent, the (lack of) power of the constellation of private interests provides us with a reflection of the strengths and weaknesses of the state. For instance, the Netherlands is known as an established 'private interest' government or a corporatist state, in which centrally organised interest groups and trade associations play major roles in the processes of policy formation and implementation. From the early 1980s, the relatively weak Dutch state was confronted by strong private sector partners in the telecommunications domain, such as the employers associations, large

users, consumers organisations, labour unions, equipment manufacturers and the PTT administration, who all wanted a slice of the 'deregulatory' cake or at least a reward for giving up certain rights or privileges. So the Dutch coped with industrial adjustment by compensating the 'losers' through a 'negotiated' redistribution of the 'winners' benefits. A society-wide settlement was reached on non-radical and evolutionary policies, that reflected a combination of temporarily safeguarding the core monopoly and making a gradual and coordinated introduction of competition in the other market segments. The Dutch negotiated adjustment strategy aimed at finding policy alternatives acceptable to every stakeholder without touching upon vital interests or upsetting the *status quo*.

Traditionally, the strong French state has faced only poorly organised and dispersed private sector stakeholders. Evidence of this argument could be found in the telecommunications domain. Compared to the omnipresent state-controlled agencies, such as DGT/France Telecom, state-enterprises (Thomson, Bull and financial investors) and the 'private' national champions of the domestic electronics industry (such as Alcatel, Matra, CGS, etc.), the power of organised labour, employers and large users associations and consumers organisations, as institutionalised in the policy and decision making process, was weak and marginal. In the case of France the adjustment strategy in telecommunications was clearly state-led, relying upon political manipulation of the market. Government institutions such as DGT/France Télécom and the national telecommunications research institute, CNET, together with the semi-public electronics industry, stipulated the targets to be achieved. The whole process of goal formation and policy implementation was facilitated by the informal exchange of engineers and senior officials between the public sector, and quasi-private national champions. At the shopfloor and the grass roots level the interests of organised labour, including both higher and lower ranks within DGT/France Télécom, converged around the notion of an industrial strategy that was led by DGT/France Télécom on behalf of the French state. Therefore support for privatising France Télécom was not strong; the large majority of the workforce wanted to remain in the public sphere and keep the privileges of state officials serving the public interest. Throughout the decision-making process on industrial adjustment, the discussion was dominated by the French PTT and its preferred manufacturer, Alcatel, the interests of large users and consumers were given minor attention or were simply ignored.

In the UK case study we found evidence of the traditional market- or company-led adjustment strategy, where priority was clearly given to the introduction of effective competition, free trade and picking the winners of the domestic market. It was believed that the encouragement of entrepreneurship and rivalry would increase the competitiveness of the national economy as a whole. The British adjustment strategy was to establish a favourable business climate at home that would foster innovation and foreign entry, and facilitate the international expansion of its home-based firms. The benefits and costs of telecommunications restructuring between the winners and the losers in the UK, however, were distributed unevenly. The object of the radical privatisation and liberalisation policies in Britain was to meet the demands of large corporate users (such as the City-based services industry) and create innovative and

internationally successful network operators by transforming former state enterprises, such as BT and Cable & Wireless, nurturing new firms, such as Vodaphone, Mercury and the cable operators, and encouraging foreign direct investment (mainly by US and Canadian companies). The interests of residential users, organised labour and domestic equipment manufacturers were not only largely ignored but seriously damaged (and left uncompensated). For instance, the increase in charges for residential services, the erosion of the domestic manufacturing base, and the shedding of labour by BT and GEC/Plessey (without sufficient job creation by new entrants) and union busting strategies followed by management of the telecommunications companies, were the down-side of the British adjustment strategy.

The fourth institutional factor that had an impact on the particular implementation path chosen by the three countries refers to the economic approach and ideologies prevalent in national telecommunications policy. We have found evidence that the three policy responses in French, Dutch and British telecommunications reflected the established adjustment strategies at national level, namely the French approach reflected state interventionism and mercantilism, the British approach gave priority to domestic competition and free trade, and the Dutch approach emphasised domestic cartelisation and an export-led orientation towards trade. With the exception of the shift in government policy in Britain with the coming to power of the Thatcher Government in 1979 and the interruption of the right-wing Chirac Government in France between 1986 and 1988 in a period dominated by the socialists, the formation and implementation of telecommunications policies in France, the Netherlands, and the United Kingdom did not really deviate from the established routines in the pursuit of economic policy in the three countries. One could argue convincingly that the inherited economic approaches of the three countries acted as a severe constraint to the formation of policy responses to telecommunications restructuring.

The final institutional factor was the country's particular position in the international political economy. Compared to the cartelised federation of national monopolies of the past, the three governments actively contributed to the emergence of a new governance regime regulating cross-national telecommunications. This new model seems to be based on a global oligopoly of diversifying and internationalising telecommunications operators through the acquisition of new business ventures, investments abroad and the formation of international strategic alliances. The role of national governments in this global oligopoly game is to find a trade off between facilitating and supporting the international expansion of its home-based telecommunications company and attracting foreign operators linking up with new entrants in order to stimulate competition in the domestic market place. In the UK we have seen the rise and corporate expansion of three multinational companies in telecommunications with a myriad of foreign partners, namely BT, C&W/Mercury and Vodaphone, and an influx of American firms on the cable market. In France, the state clearly pursued a strategic trade policy by giving priority to transforming domestic players into worldclass transnational companies and allowing new entry to the home market only selectively. For instance, the national champion France Télécom linked up with its German equivalent DBP Telekom in the Atlas-venture,

later joined by US Sprint in the Phoenix consortium, and the activities of other foreign companies in France were only marginal. In the case of the Netherlands, national government gave priority to supporting KPN/PTT Telecom to diversify into new product markets and enter new geographical markets (by participating in the Unisource and the AT&T-instigated Worldsource-ventures) over encouraging new entry in the domestic market place.

Although all three countries belonged to the European Community, this does not necessarily mean that the impact of European integration on telecommunications policy making in France, the UK and the Netherlands was similar. Being the first mover on the liberalisation/privatisation path in Europe in the mid-1980s, the British government was clearly ahead of the schemes set out by the European Commission for open terminal and services markets and open access to networks, starting from the early 1990s. Besides providing the European Union with real life experiences of liberalised and privatised markets that are regulated to some extent, the British government collaborated with the Commission in pushing the other member states to open up their domestic telecommunications markets and make administrative structures more transparent.

The French and the Dutch governments, concerned about the one-sidedness of the UK approach, also attempted to persuade the European Commission to follow their particular telecommunications trajectories. Compared to the radical pro-market initiatives suggested and implemented by the British, they pushed for a more modest pace of liberalisation and privatisation policies, taking into account the time needed for the national operator and the domestic market place to adjust to real competition. Especially between 1985-1989, the Dutch model of combining an exclusive concession for the provision of basic services with liberalising terminal and services market and corporatising the PTT administration, as suggested by the Steenbergen Committee, acted as a propelling force to establish one integrated European telecommunications market in due time. Later, when the implementation of the Green Paper's proposals of the Commission had gained momentum after 1989, the Dutch were overtaken by the insistence of the European Community on abolishing cross-national trade barriers and attacking the exclusive rights of the national operators. In the case of France and the Netherlands, the European Commission acted both as an agent pushing for change and speeding up the adjustments process, and acted as a serious constraint on the development of certain alternatives and excluding others. The reform of the established PTT-controlled regime in the Netherlands and France had to meet the generic provisions of the Community's anti-trust policy as well as the sector-specific requirements on liberalising particular markets, separating regulatory and operational activities and ensuring open network provision. For instance, the French were more or less forced by the Commission to liberalise voice telephony and network provision, and it is still very uncertain whether the Commission will endorse the proposed Atlas-joint venture, including the French and the German PTO working together in global service provision.

8.5 *Assessment of the Chosen Analytical Framework and Suggestions for Further Research*

The last part of this chapter evaluates the analytical framework of this study and discusses suggestions for further research. Looking at the telecommunications polities of the three countries investigated from a systems perspective, we can analyse the fit between the French, Dutch and British telecommunications systems and their industrial and national institutional environment. From such a strategic contingency approach, certain conclusions arise.

One, there is no clear evidence of 'environmental determinism'. Although the techno-economic and international environment may exert strong stimuli on national telecommunications regimes to adjust, these do not necessarily lead to immediate and uniform policy responses. The policy space and decision making freedom of the parties involved may be constrained, the critical processes of problem formulation, agenda setting, formation, enforcement and actual implementation of an appropriate policy response, are still largely shaped by domestic stakeholders and ruling coalitions. Techno-economic and international pressures have a different impact upon domestic policy making across countries, because national institutions filter out certain issues, and private and public actors bring forth their own set of preferences and strategic alternatives. For instance, dominant coalitions across countries might disagree about how to organise telecommunications restructuring. While the stakeholders in one country might propose the joint implementation of liberalisation, privatisation and regulatory reforms, stakeholders in another country might reach a compromise and implement these measures sequentially or partially. As the three case studies have demonstrated, national decision makers were only loosely coupled with their environment and could insulate their domestic telecommunications to some extent, and temporarily, from the effects of the structural forces of technological (r)evolution, shifting market supply and demand conditions, international deregulation and European integration. So there was still substantial manoeuvrability left for national governments and private stakeholders in France, the Netherlands and the UK to further their own particular interests and to make strategic choices about which particular path to follow.

Two, the feasibility of pursuing different trajectories, becomes constrained over time. For instance, the ambitious nationalisation plans of the Mitterand/Mauroy government were no longer viable in a world economy increasingly characterised by economic interdependence and global capital flows. The timing of deregulation (or entry into growth markets in general) is extremely relevant in this respect: rapid introduction of market competition and speedy reorganisation and privatisation of the former PTT administration can give a country a competitive edge, but at high social cost (industrial militancy, layoffs, uncertainty). Strategic variations and adaptive actions are subject to environmental selection, and furthermore a fit between the internal organisation of a system and a particular selection environment to which the system must adapt itself to some extent is required to secure continuity. One of the dictums in strategic contingency theory is that there is no best way to organise and that there are multiple solutions to any situation. The adjustment of the organisation

to the environment depends on the 'fit' between the internal structure and the goals of the organisation/national system, and the task environment of the system.

The national strategy chosen (i.e. to pioneer, to follow or to catch up) generally depends on the specific characteristics, skills and capabilities of particular firms (such as the incumbent and new entrants) and other stakeholders in the industry, and the socio-political and economic goals as defined and advocated by the national government. This holds true for our three country studies: there is no best telecommunications system or ideal national strategy to be followed. The British system was probably the most cost-effective and responsive to domestic demand, the French the most technologically advanced, while the Dutch system was probably most effective in meeting the different socio-political demands. In his longitudinal study on the diffusion of the telephone, Flichy (1995: 8) noticed clear differences between France and the UK, differences that still apply today: *'Whereas the French conceived of the telephone as an instrument of power, the English saw it more as a commercial tool.* One could add to this that the Dutch considered it more as an instrument to forge socio-economic cohesion through regional development, fiscal policy and collaborative export policy. In the future, however, ongoing liberalisation and regulatory reform might require further adjustment of corporate and government strategies and industrial structures at national level. In order to prevent a structural mismatch from arising between a prospective dynamic and turbulent telecommunications environment and inward-looking national systems still reflecting the legacy of the past, further corporate and industrial restructuring and an alternative regulatory/policy framework might be necessary.

Three, a social system such as the national telecommunications polity, has to cope with changing environmental conditions and make adaptive shifts, while ensuring some degree of internal cohesion. Different environments place varying requirements on the social system: the rapidly changing and increasingly complex environment of present day telecommunications, for instance, poses different demands on the organisation, compared to those of the stable and well-organised environment of the past. In contingency theory parlance, in a more homogenous and placid task environment the formalised and hierarchical form will be more appropriate; the more diverse, complex and dynamic the task environment, the more appropriate will be the organic or flexible form. However, there needs to be some degree of similarity between the system and relevant environmental conditions.

One could qualify UK telecommunications as an open and pluralist system that has accommodated to the turbulent environment relatively quickly. The UK system has established reciprocal linkages, tying it and relating it to those elements that surround and affect it, facilitating the pursuit of flexible adjustment strategies (e.g. the promotion of transnational solutions) and innovative policies (e.g. the creation of OFTEL, duopolies, price controls, and asymmetric regulation). The obverse of such an open and permeable system is erosion of the autonomy of, and the domestic control over, the system, leaving it increasingly dependent on environmental dynamics (e.g. new entry and foreign direct investment). For instance, while the powers of the British government over BT have substantially diminished over the

years, the roles of international partners and competitors, supranational institutions, such as the European Commission, the GATT and global financial investors (as stockholders), have gained importance. Such an open system as UK telecommunications that promotes first mover strategies while running the risk of losing internal cohesion and co-ordination, could be characterised as the 'strength of weak ties' (Granovetter 1973).

The French telecommunications polity seems to reflect a closed and rational system that combines hierarchical control with self-sufficiency and hostility vis-à-vis its environment. Benefiting from its effective internal coordination mechanism, the French policy community was obsessed with catching up with its foreign competitors through high-risk leapfrogging strategies, while protecting the domestic structure base with coherent industrial policies (e.g. large R&D and public procurement programmes, the consolidation and/or nationalisation of leading firms). These proved extremely successful in the 1970s with the modernisation of its domestic telecommunications infrastructure. As the lengthy and extremely delicate process of reorganising and privatising France Télécom from the late 1980s shows, an effective forging ahead strategy can easily switch to one of 'falling behind', if domestic adjustment to an ever-increasingly complex environment is delayed or environmental signals are ignored. This situation occurred at the end of the 19th century, when the French government made large-scale improvements to the state-run canal system and granted huge sailing ship subsidies, at a time when the railways and the steamships were taking over (Shonfield 1965). Such a relatively closed and rational system as French telecommunications advancing catch up strategies on the basis of solid internal coordination and controls with the risk of 'cocooning' and being unable to enact dynamic environmental forces, could be characterised as the 'weakness of strong ties'.

The Dutch telecommunications polity seems to reflect a relatively open and natural system, that makes for domestic negotiations whilst keeping an eye on changes in the environment. The Dutch policy system, in which environmental shifts filter through, searches for a 'balanced' and modest adaptation to changing techno-economic and international conditions. This adaptation process is prepared and implemented carefully so as not to threaten the internal balance of power and the consensus reached in the negotiations over the previous adjustment process. Thus the Netherlands has pursued a second mover (or follower) strategy, but it has lacked the decisive powers to adjust quickly, and therefore runs the risk of falling behind. Such a permeable and natural system as Dutch telecommunications navigating between the open British approach and the French closed approach, could be characterised as the 'timidity of informal ties'.

This comparative study on government-industry relations has predominantly focused on the national level of European states. Further research could focus on an examination of the precise roles of the European Commission, European Parliament and European Court of Justice tracing the influence and the power of non-European (i.e. American and Japanese) stakeholders in developing an EU-wide telecommunications policy. This would involve investigating issues such as the

impact of techno-economic leadership and the benefits of foreign direct investment in Europe by American companies, a critical assessment of European strategic trade policies and a benchmarking study comparing the performance levels of the US and EU telecommunications industries. Another relevant research question is whether the emerging European federal regime can learn something from the American governance structure? The formation and implementation of telecommunications policy is carried out by a multitude of, partly overlapping, federal institutions and regulatory agencies such as the Department of Commerce/NTIA, the Courts, the Federal Communications Commission, the Antitrust Division of the Department of Justice, and state-level public utility commissions.

After having investigated the responses of three distinct European countries, with varying domestic ruling coalitions and institutional structures to the restructuring process in telecommunications, one could extend the explanatory power of the research framework a little further by looking at sectors with different but nonetheless related profiles. For instance the electricity utilities, postal services, public transport, water distribution, in European countries with a size comparable to the three investigated in this study, such as Belgium, Sweden, Germany, Finland, Switzerland, and Italy. Such a broadening of the research could provide evidence on whether one particular country would follow the same path in restructuring its domestic airlines, energy, postal services, public transport and water distribution as it pursued in telecommunications. If this were the case, then it would support the national diversity argument, implying that divergent strategic responses and policy styles of particular states to the restructuring process do take place in infrastructure industries. Or, it might be that the transformation of European public utilities from nationally controlled monopolies into particular industry-based governance regimes (e.g. varying from international oligopoly to regional monopolies) takes place irrespective of national peculiarities and contingencies. If so, then this discovery would support the sectoral convergence thesis.

Such a research agenda could investigate whether dominant national responses exist to structural techno-economic and global forces in the infrastructure domain (i.e. the 'typical' Dutch, French, British, or German approach) or whether there is evidence for dominant sectoral responses to the far-reaching shifts in technologies, markets and regulations across nations (i.e. reflecting the structural characteristics of telecommunications, energy etc.). The institutional framework used to compare telecommunications policy could be further refined by selecting European countries with interesting sectoral and/or national institutional idiosyncrasies. For instance, future research could focus on: the Danish and Finnish telecommunications sectors with slightly different market characteristics (regional monopolies and duopoly respectively); public utilities in countries with a federal two-tiered political system (Belgium, Germany); key sector in national economies with a strong developmental character (Ireland, Spain, Portugal and Greece); countries with excellent or poor public sector performance (the Netherlands vis-à-vis Italy or Belgium); or compare labour-intensive with capital-intensive public utilities (postal services or railways with telecommunications or energy distribution).

In the mid-1990s British Telecom, France Télécom and KPN/PTT Telecom face a business environment that is completely different from that of the early 1980s. Telecommunications is no longer a domestically controlled market with a pervasive role for the PTT administration, central government and national constituents. It is becoming an international oligopoly with the emergence of large diversified firms, that link up with local and international partners to form global communications companies and provide a multitude of services. Operating at a variety of market levels, the strategic behaviour of the former PTT administrations, besides serving domestic customers and acting as a local constituency for their home governments, is contingent upon the role of their international business partners (whether AT&T, MCI or Sprint) effectively meeting the demands of large users for global services, and satisfying (future) shareholders.

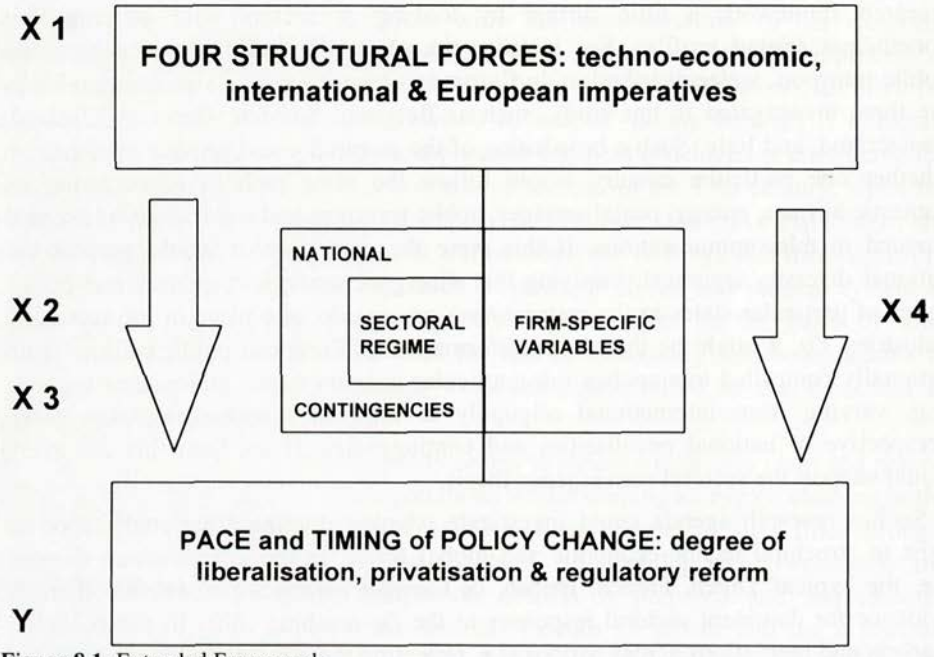

Figure 8.1: Extended Framework

At the end of this comparative study, one could further extend the chosen research model by adding a new variable, namely *company style* (X4)(see fig. 8.1). As a consequence of privatisation, liberalisation and regulatory reform measures, the dominant operator and the telecommunications services industry have become disentangled, thereby calling the relatively autonomous company-level of analysis into being. Firm-specific variables refer to the specific strategies and distinctive capabilities of commercialising and internationalising PTOs and their selection of the key stakeholders for their new business (cf. Porter 1990; Kay 1993; Ruigrok & Van Tulder 1995; Nelson 1991; Whitley 1992, 1994). Former PTTs have gained a substantial independence to develop their own skills (e.g. technical and marketing expertise, lobbying, partnerships with suppliers and users) and business portfolios

(e.g. cost-leadership, differentiation, diversification), to set priorities on their own (e.g. profit maximisation, increasing market share and/or growth/market) and to choose their strategic partners (both domestic and international). Moreover, challenged by the emergence of international competition and domestic rivalry, the 'new' telecommunications companies must accommodate a broader category of stakeholders in their strategic and operational management. In addition to the traditional ones such as the government, suppliers and the labour force, the stakeholders of today's PTOs also include stockholders, (merchant/universal) banks, leading-edge customers and, of course, (potential) competitors and strategic partners.

All these strategic choices might illuminate an (emerging) particular *company style*, that could cut across the carefully distinguished domestic-sectoral, national and international levels of analysis (as followed through in our research model). Although the discretionary authority of the former European PTTs has increased over the 1980s and the early 1990s, allowing for entrepreneurship, growth, profit maximisation and alliance formation, a substantial part of their routines, business operations and strategies are still shaped by persistent political and economic institutions at the national (and increasingly) EU-level. Notwithstanding the impact of technological innovation and the internationalisation of markets and regulations, the (former) PTT administrations still dominate the domestic market. This holds true for the UK, the Netherlands and France. Governments' traditional concern about the public operator, national equipment champion and other important domestic stakeholders has not disappeared, though the tight relationships have become less overt and direct. The reasons for national government to safeguard the interest and protect the privileges of the PTT/PTO are to be found in fiscal policy (i.e. financial contributions to the Treasury (taxes, dividends and proceeds from the flotation), industrial policy (e.g. nation-wide infrastructure, employment objectives, regional development) and technology policy (e.g. electronics manufacturing and service provision as growth engines, and concerns about national independence/security). In a liberalised but still regulated telecommunications sector, the roles of governments still show substantial ambiguity between defining and regulating the domestic industry (i.e. licensing, policing the incumbent's pricing and market behaviour) and fostering the successful expansion of its privatised national champion into new product markets and geographical areas (by foreign acquisitions and corporate alliances).

Telecommunications globalisation, in which governments and PTOs have become actively involved, seems to be characterised by strategic trade policy, in which market access and foreign investments are negotiated and trade deals are made between home and host governments, and between a local and global business partners. The incumbent PTOs have succeeded in controlling their external environment, by a mix of strategic and tactical moves aimed at maximising the dependency of third parties and minimising their dependency upon others. Benefiting from their 'historic' assets, such as exclusive rights, a monopolistic market structure, their privileged relationships with key suppliers and leading edge customers, and its strategic position in the national economy, the PTOs effectively fended off threats and challenges to their dominant position in both the market place and the policy arena. They also implemented programmes that would enhance technical efficiency,

innovation, diversification, and national and global integration, aimed at pre-empting competition and restricting market entry for outsiders. This research has shown that both history and nations matter concerning the restructuring of firms in a globalising industry such as telecommunications. Despite the permeation of structural forces into domestic public monopoly regimes, the PTOs (still) have retained their solid base: their sunk investments, accumulated capabilities and inherited government privileges allow them to see a more competitive future ahead.

Appendix: List of Officials and Experts Interviewed (1991-1994)

France

J. Arlandis (IDATE)
J-P. Chamoux (Droit et Informatique; and Université de Marne-la-Vallée)
J-P. Nioche (Hautes Études Commerciales)
Th. Vedel (CEVIPOF/CNRS)

The Netherlands

H. Albeda (Consumentenbond, Consumers' Association)
D. de Bruin (Ministry of Economic Affairs);
P. de Graaf (CIB/RCO, Centre for Information Policy/Council of Central Employers' Associations);
A. de Jong (then PvdA MP (Labour);
M. Kopijn (PA Consulting Group);
T. de Liefde (then Ministry of Transport and Public Works);
M. van Middelaar (Abva/Kabo, public sector union);
P. van der Pal (Ministry of Transport and Public Works)
R. Rosendaal (Ministry of Economic Affairs);
H.J. de Ru (CAPT, Commission for Advice on Postal and Telecommunications Policy; and VUA Free University of Amsterdam);
J. Scheltus (BTG, Dutch Association of Large Telecommunications Users)
N. Siljee (PTT Telecom);
C. Zwijneburg (Abva/Kabo, public sector union);

United Kingdom

B. Hogwood (University of Strathclyde)
D. Marsh(University of Strathclyde)
P. Strickland (British Telecom)
D. Souter (National Communications Union)
J. Taylor (University of Strathclyde)
W. Wigglesworth (Office of Telecommunications)

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Samenvatting (Summary in Dutch)

Dit proefschrift behelst een onderzoek naar de rol van nationale instituties in de mondialiserende telecommunicatie-industrie. Het functioneren van dergelijke instituties is onderzocht in een vergelijkende studie naar de herstructurering van telecommunicatie sturingsregimes in Frankrijk, Nederland, en het Verenigd Koninkrijk in de periode 1980-1994. Onder sturingsregimes wordt verstaan het geheel van regels, procedures en praktijken die de economische en politieke activiteiten in een bepaalde sector (of nationale economie) coördineren. Belangrijke elementen van sturingsregimes zijn: organisatie van de markt (monopolie of markt), de eigendomsverhouding van de dominante spelers in die markt, en het institutionele kader waarin transacties en onderhandelingen plaats vinden.

Eind jaren zeventig was in West Europa de telecommunicatiesector geordend middels een publiek monopolie, waarin de telecommunicatie-onderneming tot het overheidsapparaat behoorde (de PTT), en regering en parlement directe invloed uitoefenden op het ondernemingsbeleid van de PTT en haar maatschappelijke taak. Vanaf het begin van de jaren tachtig zetten ten minste *vier structurele krachten* op internationaal dit 'nationale PTT-model' onder druk: technologische ontwikkelingen, veranderingen in de vraag (mondialisering van de communicatie markt), internationale deregulering, en Europese integratie. Nationale overheden, de PTTs en andere stakeholders werden gedwongen hun strategie en interne organisatie te heroverwegen en eventueel aan te passen aan bovengenoemde veranderingen in hun institutionele omgeving.

Het bovenstaande leidt tot de volgende onderzoeksvraag:

gegeven de invloed van de vier bovengenoemde structurele krachten, is er dan ruimte weggelegd voor Europese staten om hun politiek-economisch systeem aan te passen op zodanige wijze, dat het met de verschillende preferenties van actoren en institutionele contingenties op zowel het macroniveau van de staat als het bedrijfstakniveau rekening houdt?

De probleemstelling richt zich op het debat in de vergelijkende beleids- en organisatiewetenschappen en de comparatieve politieke economie tussen de *convergentie-these* en nationale diversiteit of *divergentie-these*. De eerste doelt op

een toenemende gelijkvormigheid van herstructureringsstrategieën tussen landen; de tweede veronderstelt dat nationale belangen en condities een belangrijke rol spelen en dat er derhalve ruimte is voor meerdere herstructureringsstrategieën. Om de verschillende strategieën van het bovengenoemde drietal landen te onderzoeken en met elkaar te vergelijken, wordt het volgende 'multilevel' onderzoeksmodel gehanteerd. Hierin worden een drietal onafhankelijke variabelen onderkend:

- *de 'extra-nationale' variabele*: de invloed van eerder genoemde vier structurele krachten: a) technologische (r)evolutie, b) mondialisering en differentiatie van de markt, c) internationale deregulering, en d) Europese integratie;
- *de sectorale sturingsvariabele*: institutionele arrangementen op het bedrijfstaksniveau, die de transacties en onderhandelingen tussen de dominante onderneming, andere marktpartijen, de overheid en belangengroep constitueren;
- *de nationale context variabele*: de unieke mix van sociale politieke, economische en historische elementen van de te onderzoeken landen, die tezamen het specifieke karakter van de macro-institutionele setting aangeven, waarin de vorming van het telecommunicatiebeleid is ingebed.
- de *afhankelijke variabele* is de *mate en de timing van het doorvoeren van veranderingen* in het telecommunicatiebeleid van de onderzochte landen. Het gaat hierbij om de beleidsvorming en -implementatie in termen van een hervorming van de in het begin van de jaren tachtig bestaande monopolistische ordening van de sector. Het gaat hierbij om de *liberalisering* van de telecommunicatiemarkt, om de verandering in de eigendomsverhouding van de PTT middels *privatisering*, en de herdefiniëring van de taken van de overheid, de PTT administratie, en de marktpartijen in de nieuw ontstane situatie door middel van een *herregulering* van het toezicht.

In hoofdstuk 2 staat het debat over *convergentie-divergentie* centraal, zoals dat in de laatste decennia in de vergelijkende beleids- en organisatiewetenschappen en de comparatieve politieke conomie is gevoerd. Belangrijke concepten die in dit verband worden besproken zijn: sectorale en nationale beleidsstijlen, 'techno-globalism' en 'techno-nationalism'. Drie generieke nationale strategieën worden geïntroduceerd: markt-georiënteerde, overleg-georiënteerde en staats-georiënteerde regimes. In een markt-georiënteerd regime nemen vooral de bedrijven de kosten *èn* de opbrengsten van concurrentie en innovatie voor hun rekening. In een overleg-georiënteerd regime zoeken de organisaties van werkgevers en werknemers tezamen met de overheid naar collectieve oplossingen om aanpassingen in de techno-economische structuur door te voeren. Een staats-georiëenteerd regime wordt gekenmerkt door een sterke overheid die (pro)actief stuurt en leiding geeft aan de uitvoering van het nationale industriebeleid. Verder wordt in dit hoofdstuk de nationale context variabele uit het onderzoeksmodel nader gespecificeerd. Gourevitch (1986) heeft gesteld dat de 'response' van staten op de 'stimuli' van structurele internationale economische ontwikkelingen wordt bepaald door een vijftal nationale contingenties, te weten: het productieprofiel van een land (bijv. geografische en economische condities, sterke en zwakke industriële sectoren), de rol van de staat (organisatie van de overheid en de positie die de overheid in de economie inneemt), het stelsel van belangenbehartiging

(de rol van werkgevers- en werknemers-organisaties en banken in de totstandkoming van het economische beleid), economische cultuur en ideologie (het stelsel van dominanten waarden en normen zoals dat de organisatie van economische activiteiten beïnvloed) en de positionering in internationale politieke en economische verbanden (de profilering binnen de Europese Gemeenschap, de GATT, en het handelsbeleid).

Hoofdstuk 3 begint met een overzicht van de traditionele organisatie van de telecommunicatie. Nog niet zo lang geleden waren PTT-beleid en telecommunicatiebeleid in de meeste Westeuropese landen synoniem van elkaar. Behalve bij de taak van de produktie van telefoon-randapparatuur en schakelcentrales, was de PTT bij elk aspect in de totstandkoming en uitvoering van het telecommunicatiebeleid betrokken. Veelal maakten PTT's zelfs integraal deel uit van het overheidsapparaat. Bijna honderd jaar is de markt geordend geweest volgens dit nationaal publiek monopoliemodel. Dit traditionele regime was gebaseerd op het natuurlijk monopolie van het telefoniesysteem, waarin de nationale overheid (of het staatsbedrijf der PTT) exclusief belast met het beheer en exploitatie van het systeem en kruissubsidiëring ter bevordering van universele dienstverlening en sociale herverdeling.

Sinds het einde van de jaren zeventig is dit nationale PTT regime door vier structurele krachten op internationaal niveau onder druk gezet:

- technologische (r)evolutie: innovaties die het schaarste probleem met betrekking tot netwerkcapaciteit en frequenties opheffen (coax, ISDN, glasvezel, GSM etc.); de opkomst van alternatieve transmissiemogelijkheden naast de PTT infrastructuur (kabelnetten, satellietverbindingen, cellulaire netwerken etc.); en de convergentie van informatie- en telecommunicatietechnologieën die leidt tot een veelvoud van nieuwe geavanceerde diensten zoals tele-informatiediensten, intelligente netwerken, en 'call back services'.
- mondialisering en differentiatie van communicatie markten: kwantitatieve en kwalitatieve veranderingen in de vraag naar diensten en produkten, gekenmerkt door een sterke vraag naar geavanceerde en gespecialiseerde diensten en produkten tegen concurrerende prijzen; de introductie van concurrentie, concentratie en mondialisering aan de aanbodskant tot uiting komend in de entree van nieuwe 'private' operators, de differentiatie en diversificatie van het aanbod, en de trend tot schaalvergroting en (inter)nationale strategische allianties in aanpalende produkt of geografische markten.
- Internationale deregulering: de vroege en snelle beleidsveranderingen zoals doorgevoerd vanaf de jaren vijftig in de Verenigde Staten (VS) hebben geleid tot de internationale expansie van Amerikaanse bedrijven; deze deregulering in 's werelds belangrijkste telecommunicatiemarkt werd gevolgd door verregaande privatiserings- en liberaliserings-operaties in het Verenigd Koninkrijk en Japan, en een door deze landen gelanceerd vrijhandelsoffensief met betrekking tot de ordening van de internationale telecommunicatie;

Europese integratie: de toegenomen invloed van de Europese instellingen, zoals bijv. de Commissie, het Parlement en het Hof van Justitie en de totstandkoming van de Interne

Europese integratie: de toegenomen invloed van de Europese instellingen, zoals bijv. de Commissie, het Parlement en het Hof van Justitie en de totstandkoming van de Interne Markt leiden tot een (geleidelijke) verschuiving in de besluitvorming naar het Europese niveau;

In de hoofdstukken 4, 5 en 6 zijn de plannen en activiteiten inzake de herstructurering van het telecommunicatiebeleid in een drietal landen besproken en met elkaar vergeleken in Hoofdstuk 7. De drie gekozen landen zijn voorbeelden van de eerder genoemde nationale strategieën: a) marktgeoriënteerd: het Verenigd Koninkrijk; b) overleg-georiënteerd: Nederland; en c) staatsgeoriënteerd: Frankrijk. Aan de hand van de Gourevitch' vijf nationale variabelen zijn de institutionele setting, waarbinnen het Britse, Franse en Nederlandse telecommunicatiebeleid tussen 1980 en 1994 is gevormd.

De Britse nationale context werd gekenmerkt door sturing door middel van de markt en de dominante dienstverlenende sector met cruciale wereldwijde belangen (de City als internationaal financieel centrum), die effectief en efficiënt bediend zouden moeten worden door de geprivatiseerde telecommunicatie-ondernemingen British Telecom (BT) en Cable & Wireless (Hoofdstuk 4). Het is met name de internationale dienstensector in het Verenigd Koninkrijk geweest, die de veranderingen hebben geëntameerd en van een meer efficiënte en klantvriendelijker telecommunicatiesector hebben geprofiteerd. Met name het veilig stellen van Londen als internationaal centrum was hierbij in het geding. Een andere factor die een belangrijke drijfveer was voor het doorvoeren van radicale veranderingen was de (economische) ideologie van het neo-liberalisme van de Thatcher en Major regeringen, op basis waarvan een grootschalig privatiseringsprogramma werd uitgevoerd. Deze nationale setting heeft grote invloed gehad op de snelle privatisering van British Telecom (BT) en een bijna volledige liberalisering van de telecommunicatiemarkt in 1984. Tevens werd de rol van de overheid in een omgeving met marktwerking en een geprivatiseerde telecommunicatie-onderneming geherdefinieerd door een nieuwe onafhankelijke 'regulator' op te richten, OFTEL.

Behalve de dienstenindustrie en de telecommunicatiegrootgebruikers, hebben nog een aantal bedrijven en partijen voor een sterk concurrerende en dynamische markt gezorgd. BT heeft zich danig gereorganiseerd en heeft zich opgeworpen, in aanvulling op haar positie als de dominante partij op haar Britse thuismarkt, als aanbieder van wereldwijde geavanceerde diensten voor grote multinationale ondernemingen. Tevens hebben nieuwe operators, zoals Mercury, Vodafone, Orange, Energis, kabelbedrijven etc. kunnen profiteren van de kansen die werden geboden op de Britse markt. Ook de meerderheid van de consumenten hebben baat gehad bij de hervormingen, zoals die zijn doorgevoerd: zij hebben nu meer keuzemogelijkheden en kunnen profiteren van de scherpe prijzen voor interlokale en internationale telefonie. Tot de 'verliezers' van de 'shock therapie' zoals doorgevoerd in de Britse telecommunicatie zijn de afgevloeide werknemers van BT (meer dan 100.000), de vakbonden die hun collectieve belangenbehartiging voor de werknemers zagen aangetast, en de Britse elektrotechnische industrie (GEC, Plessey), die hun positie als

BT's hofleverancier zagen aangetast door toegang van buitenlandse leveranciers (Siemens, Ericsson) tot de Britse markt.

Nederland heeft vooral een 'volgend' beleid gevoerd, waarin de ontwikkelingen in het buitenland nauwlettend werden gevolgd en geprobeerd van de ervaringen in bijvoorbeeld Groot-Brittannië te leren (Hoofdstuk 5). Door middel van geïnstitutionaliseerd overleg, waarin de PTT als intermediair fungeerde tussen overheid, markt en andere partijen, werd gezocht naar niet-controversiële oplossingen die iedereen tevreden konden stemmen. Deze strategie en werkwijze was met name succesvol in de jaren tachtig, toen binnen de Commissies Swarttouw en Steenbergen, na intensief overleg met alle belanghebbenden, een consensus werd gecreëerd over de toekomstige inrichting van het Nederlandse telecommunicatiebeleid. In de nieuwe Wet op de Telecommunicatie-voorziening van 1989 werd het volgende vastgelegd: een liberalisering van de randapparatuur en de toegevoegde dienstenmarkt, een exclusieve concessie voor het exploiteren van de infrastructuur en de basisdiensten werd verstrekt aan KPN/PTT, en een verzelfstandiging van KPN/PTT (en een privatisering op termijn).

De consensusgeoriënteerde en stapsgewijze beleidsaanpak bleek haperingen te vertonen in het begin van de jaren negentig toen voortgaande ontwikkelingen in de informatie- en telecommunicatietechniek, richtlijnen uitgevaardigd door de Europese Commissie, de grootgebruikers van telecommunicatievoorzieningen en aanbieders van alternatieve netwerkcapaciteit (kabelbedrijven, NS, energiebedrijven, buitenlandse toetreders) om een verdere liberalisering èn regulering van de markt vroegen. Deze eisen veroorzaakten een aantal conflicten in het beleidsproces, zoals de stimulering van marktwerking, innovatie en efficiency enerzijds en de bescherming van KPN/PTT anderzijds. Andere beleidsdillemma's waren de coördinatie van de PTT infrastructuur en de alternatieve infrastructuur van de spoorwegen, kabel- en energiebedrijven, en de afstemming tussen het Ministerie, de concessiehouder, en andere economische en politieke 'stakeholders' in het beleid. Echter na enige verwarring en onenigheid over de precieze richting van het beleid, lijkt er nu brede overeenstemming te bestaan over een toekomstig beleid dat in de lijn ligt van het Europese beleid.

De hervormingen in het Franse telecommunicatiebeleid tussen 1980 en 1994 kunnen worden gekenmerkt door een grote mate van overheidsinterventie in de telecommunicatiesector (zie hoofdstuk 6). Dit dirigisme werd gekenmerkt door indicatieve planning en industriebeleid, staatsondernemerschap (middels de Direction Générale des Télécommunications (DGT) en haar opvolger het semi-zelfstandige France Télécom) en mercantilisme (het exportoffensief met betrekking tot Ministel, het creëren van Alcatel/CIT/CGE als nationale kampioen). De reden voor deze verregaande overheidsinterventie in de Franse telecommunicatie-sector gaat terug tot het begin van de jaren zeventig toen het Franse telecommunicatienetwerk bekend stond als één van de minst geavanceerde in West-Europa en bedrijfsleven en burgers klaagden over lange wachtlijsten, slechte dienstverlening en hoge tarieven. Het bestaan van een dergelijke 'flessehals' in de Franse economie en de dereguleringsactiviteiten in de Verenigde Staten, die een (inter)nationale concurren-

tiestrijd aankondigde tussen AT&T en IBM, waren redenen voor de Franse regering om de modernisering van het Franse telecommunicatienetwerk en de herstructurering en stimulering van de elektrotechnische industrie te prioriteren in haar economische plannen. In de periode 1978-1994 leidde dit alles tot een gigantische investeringsoperatie, waarbij behalve een aantal mislukkingen (bijv. het 'Plan Câble'), ook successen werden geboekt, zoals een succesvolle diffusie van Minitel terminals en videotex diensten onder de Franse bevolking, en een grote verspreiding van het publieke datanetwerk Transpac en ISDN door het hele land. Mede door ingrepen van de Franse overheid en de strategische overname van ITT Europe, wist Alcatel/CGE/CIT uit te groeien tot 's werelds grootste telecommunicatie-leverancier.

De DGT van de Franse PTT was belast met de formulering en uitvoering van het telecommunicatiebeleid en de stimulering en orkestratie van de elektrotechnische industrie. DGT's activiteiten buiten de telecommunicatie-sector hadden bijvoorbeeld betrekking op R&D (in nauwe samenwerking met CNET, CNES en Alcatel), de bouw van kabelnetten en de rationalisering van de computer industrie (het subsidiëren van Bull) en de eletronica-industrie (het steunen van Thomson). De strategische rol, die de DGT in het telecommunicatie- en industriebeleid kreeg toebedeeld, had ook consequenties voor het personeel en management: juist door als spin in het dynamische elektrotechnische web te opereren kon het personeel zich emanciperen ten opzichte van 'La Poste' en werd het *corps* van DGT's ingenieurs opgenomen bij de technocratische elite in de Franse samenleving. Dit betekende niet dat de Franse telecommunicatiemarkt totaal gesloten was en dat de positie van DGT/Franse Télécom onomstreden was. Weliswaar waren een aantal zaken erg controversieel (zoals de juridische status van France Télécom en concurrentie op het terrein van de basisdiensten en netwerkcapaciteit), het beleid inzake toegevoegde diensten, randapparatuur en mobiele telefonie was redelijk liberaal (de markttoegang was echter tot Franse bedrijven beperkt).

In de drie onderzochte landen hebben zich ook een aantal vergelijkbare ontwikkelingen voorgedaan (Hoofdstuk 7). Zo is er in Frankrijk, Nederland en het Verenigd koninkrijk gedifferentieerd naar de verschillende functies en verantwoordelijkheden die de PTTs in het traditionele publieke monopolie regime innamen. Zo verzorgden zij bijvoorbeeld de volgende taken: de nutsfunctie van het netwerkbeheer, de ondernemersfunctie in de nieuwe diensten- en apparatuurmarkt, de regulerende functie middels het afgeven van licenties, machtigingen en normeringsvereisten, en de beleidsondersteunende functie van PTT voor de verantwoordelijke minister middels actieve en soms zelfs exclusieve betrokkenheid in de vorming en uitvoering van het telecommunicatiebeleid. In de jaren tachtig zijn deze functies herverkaveld en is een proces van ontvlechting tot stand gekomen. De diensten- en randapparatuurmarkt zijn geopend in de drie landen (met uitzondering van telefonie in Nederland en Frankrijk) en de vaste verbindingen en telefonie worden voor 1998 geliberaliseerd. De drie PTTs opereren nu op afstand van de nationale overheid en zijn reeds (voor meer dan 50 %) geprivatiseerd (het Verenigd Koninkrijk en Nederland) of hun privatisering wordt voorbereid (Frankrijk). Mede geïnstigeerd door het stringente beleid van de Europese Commissie is er een duidelijke scheiding aangebracht tussen de regelgevende en de beleidsondersteunende activiteiten aan de

ene kant en de operationele activiteiten aan de andere kant: de eerstgenoemde publieke taken ressorteren nu onder de directe verantwoordelijkheid van de overheid en de laastgenoemde private taken zijn nu toebedeeld aan de verzelfstandigde dan wel geprivatiseerde PTT's.

Dit proces van ontvlechting zet zich echter nog verder door middels het verder scheiden van de beleids- en regelgevende functies binnen het overheidsapparaat en de nuts- en ondernemingsfunctie binnen de PTT-organisatie. Er treedt een proces van differentiatie op tussen de beleidsbepalende aan de ene kant en de toezichthoudende en regelgevende functies aan de andere kant. De eerste wordt zonder meer tot de kerntaken van de overheid gerekend terwijl voor de tweede categorie van taken de instelling van een zelfstandig bestuursorgaan, dat op afstand van de overheid opereert een alternatief is. Een dergelijk *regulatory agency* zelfstandig bestuursorgaand is reeds ingevoerd in het Verenigd Koninkrijk met OFTEL, en wordt voorbereid in Nederland met HDTP/TND en wordt serieus overwogen in Frankrijk. Tevens is in de nieuwe situatie gestipuleerd dat er binnen de operationele activiteiten van de PTT's nieuwe stijl een administratieve scheiding aangebracht dient te worden tussen hun gereguleerde diensten (bijv. telefonie en netwerkcapaciteit) en de vrijgeven produkten (bijv. tele-informatiediensten en randapparatuur). Echter terwijl er aan de politiek-bestuurlijke kant een ontvlechting en differentiatie van taken optreedt, manifesteert zich in het zich uitbreidend marktdomein juist een integratietendens. Op zowel nationaal als Europees/internationaal niveau vindt er een proces van concentratie en netwerkvorming plaats middels commercialisering en internationalisering van de traditionele PTTs, verticale integratie (tussen operators, leveranciers en/of softwarebedrijven) en strategische allianties van de Britse, Franse en Nederlandse PTTs met andere telecommunicatie-ondernemingen (zoals bijv. Unisource, Global One/Atlas/Phoenix, en Concert).

Zoals aangegeven in tabel 7.1, waarin de jaartallen van de belangrijke besluiten met betrekking tot liberalisering, privatisering en (her)regulering in de drie landen zijn opgenomen, zijn er wel degelijk verschillen. Het Verenigd Koninkrijk was zonder meer het meest voortvarend in het implementeren van een nieuw sturingsregie, waarin British Telecom is geprivatiseerd en een onafhankelijke toezichthouder is geïnstalleerd. De telecommunicatiemarkt is bijna volledig geopend: een geliberaliseerde diensten- en apparatuurmarkt, een BT Cellnet-Vodafone duopolie (later oligopolie met Mercury One-2-One en Orange) en een BT-Mercury duopolie op de markt voor vaste verbindingen en telefonie. Na 1991 werd dit duopolie vervangen door een oligopolie waarin ook kabelbedrijven en andere bedrijven actief zijn. Deze situatie steekt schril af met die in Nederland en Frankrijk. In Nederland gaven met name het verder liberaliseren van de markt (de kernsegmenten infrastructuur en spraaktelefonie) en het instellen van een *regulator* stof tot felle discussies en conflicten en hiermee tot het uitstellen van beslissingen. In tegenstelling tot Groot-Brittannië en Frankrijk, waar felle conflicten spelen en speelden over privatisering, verliep de privatiseringsoperatie van PTT/KPN geruisloos. Net als Nederland laat ook Frankrijk twee kanten zien.

Terwijl privatisering en zelfs verzelfstandiging tot voor kort volstrekt onbespreekbaar in Frankrijk waren (vgl. Nederland en Groot Brittannië), was de

randapparatuurmarkt al geopend voor (binnenlandse) concurrentie aan het einde van de jaren zeventig (voor deze markt in het Verenigd Koninkrijk werd opengesteld in 1981). De oppositie tegen privatisering in Frankrijk is sterk, en wordt gevoed door een complex van weerstanden die verband houden met de bevoorrechte posities van ambtenaar en het *corps des ingénieurs* voor het France Télécom personeel, de status van de publieke dienstverlening (*service public*), en industrie-politieke en militaire afwegingen. Dit betekent echter wel dat de weerstand tegen een liberalisering van het publieke netwerk en spraakmonopolie wel groot is (dit raakt namelijk de kern van France Télécom's business), dit in tegenstelling tot steun voor de snelle liberalisering van de markt voor randapparatuur en diensten. Deregulering is enigszins omstreden en duidt vooral op twee verschillende politieke visies ten opzichte van de rol en de positie van de toezichthouder en de overheid in de telecommunicatiesector: terwijl de liberalen en de Gaullisten een voorkeur lijken te hebben voor een toezichthouder op (enige) afstand van de markt en de overheid, prefereren de socialisten een sterk PTT ministerie, waarbinnen de toezichthouder zal moeten opereren en die bovendien hechte banden onderhoudt met France Télécom.

Hoofdstuk 8 gaat in op het beantwoorden van de onderzoeksvraag en op de relevantie van de convergentie en divergentie these met betrekking tot de uitkomsten van het onderzoek. In het onderzoeksmodel is gewezen dat de verschillende herstructurerings-strategieën bepaald worden door de invloed van de structurele krachten op nationale systemen en dominante coalities en institutionele contingenties binnen dat nationale systeem om zich aan die omgeving aan te passen. Alhoewel de drie landen met dezelfde structurele krachten op internationaal niveau werden geconfronteerd, was hun reactie daarop niet altijd gelijkvormig. Zo hanteerde de Britse regering een duidelijke 'first-mover strategie' door reeds vroeg te anticiperen op de verregaande invloed van techno-economische veranderingen en deregulering in de VS, op de traditionele organisatie van de telecommunicatie-sector, door radicaal te liberaliseren en te privatiseren. Enerzijds gedwongen door toenemende Europese wetgeving en anderzijds weloverwogen om te 'leren' van buitenlandse ervaringen, volgde de Nederlandse overheid een diffusie-georiënteerde strategie, waarin het focus minder op de beleidsvorming en meer op de uitvoering kwam te leggen. Deze strategie werd bovendien gevoed door het zoeken naar consensus onder de nationale stakeholders en waar radicaliteit werd verdrongen door compromissen en incrementele besluitvorming. De Franse strategie was een door de overheid georganiseerde 'inhaalstrategie', gericht op het moderniseren van een onderontwikkelde infrastructuur en het 'nationaliseren' van een gefragmenteerde en door buitenlandse bedrijven beheerste telecommunicatie hardware industrie (*'francisation'*).

De uitkomst van dit onderzoek is dat geen van de drie nationale herstructureringsstategieën de beste is, maar dat het met name om de 'fit' of congruentie tussen de omgeving en de interne structuur en doelen van het nationale (telecommunicatie)systeem gaat. Zo zou bijvoorbeeld het Britse systeem als meest efficiënt en klantgericht getypeerd kunnen worden, het Franse als het meest technologisch geavanceerd, en het Nederlandse als het systeem dat het meest rekening houdt met alle verschillende belangen in de telecommunicatiesector. Het Britse systeem was het meest open en pluralistisch in het opnemen en verwerken van

de structurele krachten en hiermee in het toelaten van nieuwe partijen op de markt en het opzetten van een nieuw sturingsregime. Het 'revolutionaire' gehalte van het Britse telecommunicatiebeleid werd nog vergroot door de radicale aanval van de Conservatieve regeringen op de rol van de staat en de vakbonden in de economie, uiteindelijk resulterend in een omvangrijk privatiseringsprogramma. Het Nederlandse systeem was open en evolutionair in die zin dat ontwikkelingen in de omgeving werden onderkend, maar toch weer niet dat het bestaande sturingsregime *rücksichtlos* over boord werd gezet. Het systeem was er met name op gericht om zich geleidelijk en stapsgewijs aan de omgeving aan te passen zonder de beleidsdoelstelling van consensus over het te voeren beleid en de gevestigde structuur al te zeer aan te tasten. Het Franse systeem was relatief gesloten ten opzichte van haar omgeving en ontwikkelingen daarin. Zeker in de 'inhaal' periode bood dit gesloten systeem de mogelijkheid de doelstelling van modernisering te verwezenlijken. Echter, de congruentie tussen een relatief stabiel en enigszins afgesloten omgeving en een sterk horizontaal en verticaal geïntegreerd telecommunicatiesysteem viel weg, toen met name de Europese Commissie eisen ging stellen aan de inrichting van de telecommunicatiesector, die afweken van de Franse structuur. Deze door Brussel afgedwongen openheid van de markt en het toezicht in Frankrijk zorgde ervoor dat de interne stabiliteit in het Frans systeem en afstemming tussen het nationale telecommunicatie regime en haar taak omgeving verstoord raakte.

Tenslotte zou men het onderzoeksmodel nog kunnen uitbreiden door een nieuwe variabele toe te voegen, namelijk de 'ondernemingsspecifieke varaibele'. Als een gevolg van de overgang van een monopoliesituatie naar een meer open markt, waarin de vroegere monopolisten concurrentie krijgen van nieuwe toetreders, worden ondernemings-specifieke kenmerken belangrijker in het strategisch gedrag van bedrijven en in de herstructurering van de sector. Bij een dergelijke 'ondernemingsstijl' zou men kunnen denken aan de specifieke competenties, bevoorrechte relaties, en strategische keuzen, die ondernemingen concurrentie-voordelen en een politieke machtsbasis kunnen verschaffen.

Curriculum Vitae

Willem Hulsink studied Political and Social Sciences at the University of Amsterdam, where he took his degree in 1989 (with distinction). He started to work on his doctoral research in 1989 at the Erasmus University Rotterdam (Faculty of Business Administration); a substantial part of the research was carried out at the European University Institute (Florence). From 1993 to 1996 he was a lecturer in policy and organisation studies at Tilburg University (KUB NL). Willem Hulsink is now a research fellow at the Science Policy Research (SPRU) of the University of Sussex (Brighton UK). He has published on the diffusion of new media, European telecommunications policies, organisational innovation, privatisation and regulatory reform, and consumer protection. His current research interests include: the creation of Trans-European (information) Networks, regulation of utility sectors, strategic management in regulated and complex industries, and competition/industrial policy.

Stellingen

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DO NATIONS MATTER IN A GLOBALISING INDUSTRY ?

The Restructuring of Telecommunications Governance Regimes in France, the Netherlands and the United Kingdom (1980-1994)

Willem Hulsink

Erasmus Universiteit Rotterdam
6 december 1996

I

To paraphrase Mark Twain, the present rumours about *The End of the Nation State* (Ohmae 1995) are greatly exaggerated.

II

Liberalisering en privatisering (cq. verzelfstandiging) van de telecommunicatie- en andere nutssectoren brengen niet minder, maar juist andersoortige en in sommige gevallen juist meer regelgeving met zich mee: dit betekent her-regulering in plaats van de-regulering.

III

Onderstaande uitspraak van de politicus P. Jongeling (GPV) over de bemoeienis van de Nederlandse overheid met de PTT-tarieven, gedaan in het midden van de jaren zestig, heeft in de periode van het onderzoek (1980-1994) nog weinig aan actualiteitswaarde ingeboet: "Het moet een typisch snel renpaard zijn voor de verzending van alle mogelijke dingen, maar het begint hoe langer hoe meer te worden een traag en sloom melkkoetje voor de Regering" (aangehaald in Ottenheijm 1974: 120)

IV

Paradoxically, policy making in capitalist societies is not led by the dictum of consumer sovereignty, but by producer sovereignty; and, policy making in the regulated utilities domain is not led by public interest requirements, but by private interest concerns.

V

'Whereas the French conceived of the telephone as an instrument of power, the English saw it more as a commercial tool'(Flichy 1995: 84). The Dutch considered it more as an instrument forging socio-economic peace through innovation policy, regional development, fiscal policy and redistribution.

VI

'The beginning of administrative wisdom is the awareness that there is no one optimum type of management system' (Burns & Stalker 1961/1994: 125). The next step is to acknowledge that some linkages between business systems and task requirements and other environmental conditions are 'fitter' than others.

VII

Aan het uitvoeren van een comparatieve institutionele analyse met voldoende breedte en diepgang zijn *wel* leereffecten maar *nauwelijks* schaalvoordelen te behalen.

VIII

De bestudering van het strategisch management en de internationalisatie van de Europese infrastructuurbedrijven en -sectoren is een nog onontgonnen onderzoeksterrein.

IX

Het is jammer dat W.F. Hermans zijn genadeloos kritische ogen nooit over de organisatie-advies literatuur heeft laten gaan.

X

De electronische snelweg stelt hoge eisen aan de electriciteitsvoorziening en aan de navigeerkunsten van gebruikers en dienstenaanbieders.

XI

De paradoxale constatering van de Beus*, dat een land als Nederland, dat zo geörienteerd is op buitenlandse invloeden en ervaringen uit den vreemde, buiten beeld blijft in landenvergelijkende studies, duidt op een onderwaardering van systematisch comparatief beleidsonderzoek binnen het onderwijscurriculum en het academisch mecenaat.

* De Beus, J.(1992), 'Vergelijk of Verga'. *Beleid en Maatschappij* 1992/3: 109-110.

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