

# MANAGING INTER-FIRM COOPERATION IN DIFFERENT INSTITUTIONAL ENVIRONMENTS:

A Comparison of the Dutch  
and UK Potato Industries

MARTIJN F.L. RADEMAKERS





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(Het managen van samenwerking tussen bedrijven  
in verschillende institutionele omgevingen:  
Een vergelijking van de Nederlandse  
en Britse Aardappelindustrie)

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A Comparison of the Dutch and UK Potato Industries

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Voor Kris

*'Al de koppen had ik af en nog al met veel zorg afgemaakt – maar ik heb ze grif overgeschilderd zonder genade, en de kleur waar ze nu mee geschilderd zijn is zowat de kleur van een goed stoffige aardappel, ongeschild natuurlijk'.*

Vincent van Gogh (1885)

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## **Preface**

This dissertation is about inter-firm cooperation in different national contexts. In the past four years I have worked to formulate questions and find answers that shed more light on the influence of nationally distinct social institutions on the development of inter-firm cooperation. For this purpose, a cross-national comparative study was made of the highly competitive Dutch and UK potato industries. In tune with the inherent dual nature of the major audience of business studies, some results of this research project are of interest to practitioners, while others are more relevant to academics. The major findings indicate that both bilateral and multilateral forms of inter-firm cooperation are important means to gain competitive advantages and that the nature and degree of inter-firm cooperation can differ greatly between the same industries in different countries.

## Acknowledgements

Why does someone start working on a Ph.D. thesis? Four years ago, my answer to that question was 'because doing research is great fun.' Over the past four years I learned that this is certainly true. However, fun is just part of the story. Rather, I experienced that doing research is much like the mythological 'struggle of the sturgeons,' as described in Chinese literature, which have to fight their way up the Yellow River and pass cataracts before they can jump over the Dragon Gates to be transformed into dragons. The academic world appeared full of strong currents, branches, cataracts and other obstacles, and so did the industry wherein the field study of this research project was conducted. All in all there were more than enough challenges to get off track. There is no doubt that I would have got lost and never made my jump over the Dragon Gates without the help, support and encouragement of many persons to whom I want to express my sincere gratitude.

Thanks go to my friends, family and colleagues who were always there, interested in what I was doing, just to have some fun, and always ready to cheer me up in times when things got tough now and then. You all know who you are. Furthermore, I would like to thank my parents who have always encouraged me to study. Thanks also go to Rien Bongers, who always knows how to inspire people and who I laughed at 12 years ago when he predicted that *'One day you will study at university.'* Thanks also to Martin Wielemaker, my 'brother-in-arms' at the Strategy and Business Environment Department, from whom I learned so much by exchanging information and pieces of advice, and also sharing frustrations, fun and experiences about the Ph.D. process.

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Martijn F.L. Rademakers  
Leiden, August 1999



Part I: *Purpose, questions, and theory*



# Chapter One

## INTRODUCTION

*This thesis is concerned with the influence of social institutions on the development of cooperative inter-firm relations in the UK and Dutch agri-food sector. In this introductory chapter the context of the study is discussed and the research questions, which have guided the research process, are made explicit. In addition, the industry this study is focused upon is briefly introduced. Finally, an outline of the research design is provided and an overview of the general structure of this thesis is presented.*

### 1.1 Inter-firm cooperation

In the past decade, inter-firm cooperation has received much attention in management and organization literature (Ebers (ed.) 1997; Grandori 1998; Gulati 1998; Koza and Lewin 1998). The rapidly growing body of literature on this subject reflects the view of both practitioners and scholars that firms can gain competitive strength through collaborative arrangements with either buyers or suppliers (vertical cooperation), competitors (horizontal cooperation), or with companies from other industries (diagonal cooperation).

Why do firms that operate in competitive business environments choose to engage in some form of cooperation? Motives include strategic considerations such as linking products and skills, (re-)defining the rules of the game in the industry, and getting access to markets, knowledge, information, investment capital, production capacity, labor force, and brainpower. From an efficiency viewpoint, considerations such as lowering transaction costs, achieving economies of scale, and improving lead times could be the driving forces. In addition, firms may be encouraged to bundle their powers because of strategic developments in the business environment, such as the increasing international

scope of markets, rapid technological changes on an international scale, demands of buyers for new products while product life cycles are shortening, and high economic uncertainties (Child and Faulkner 1998: 4; Alter and Hage 1993: 42). In addition, there is a growing need among firms to promote common interests with respect to interest groups (Van den Bosch 1996) and with respect to governmental policy makers on national, federal, or European levels (Greenwood, Grote and Ronit 1992).

The existing body of literature on inter-firm cooperation covers a great variety of forms, issues, perspectives, and approaches (see Chapter 2). To date, however, relatively little attention has been paid to the influence of factors in the institutional environment of firms on the development of cooperative relations. Nevertheless, there is a growing consensus among management scholars that the institutional environment is an important shaping factor with respect to inter-organizational structures (Whitley 1992b: 29-31; Williamson 1993: 113). In other words, social institutions, such as for instance the state or the legal system, can make it either more or less attractive and/or legitimate for firms to engage in cooperative relations (Lane and Bachmann 1996; Barney and Hesterly 1996: 140). The few but increasing number of cross-national comparative studies on this subject have shown that both the degree and character of inter-firm cooperation can vary considerably across different countries (Best 1990; Orrú, Biggart and Hamilton 1991; Nishida and Redding 1992; Sako 1992; Lane 1996). Evidence from these studies supports the idea that social institutions have a considerable influence on the way firms build and shape their business-to-business relations. Social institutions are regarded here as nationally specific complexes of cognitive, normative, and regulative structures and activities that have acquired stability over time and which give meaning to social behavior (see Chapter 2). As will be explained in Chapter 3, the key social institutions that are particularly relevant to the development of cooperative inter-firm relations include the state, the financial system, mechanisms to ensure trust, and cultural conventions about individualistic behavior (Whitley 1994: 167; Rademakers and Van Valkengoed 1999). The central idea is that social institutions channel and constrain the perceptions and actions of managers and, accordingly, the way managers shape or reshape inter-firm relations. However, as will be discussed below, systematic research on this subject is still in an early stage of development (Lane 1995: 13; Kristensen 1996: 32; Ebers 1997: 8).



## 1.2 Inter-firm cooperation and social institutions

As was pointed out above, a limited number of studies is devoted to the social constitution of inter-firm relations. To date, however, these studies have been focused on a limited set of characteristics of inter-firm cooperation. In addition, forms of vertical inter-firm cooperation receive relatively much attention while horizontal relations tend to be disregarded. For instance, in her comparative study of the German and British mining machinery and kitchen utensils industries, Lane (1996) focused on contractual relations between buyers and suppliers. The characteristics of vertical cooperation in these countries were found to be nationally specific rather than converging towards one universal form. In a similar fashion, Sorge (1997), linked the divergent levels of vertical integration among German and British firms in the electronics industry with societal-based transaction costs. Other scholars limited their investigations to country specific distinct mechanisms that ensure trust in relationships between buyer and supplier firms in Hungary (Whitley, Henderson, Czaban and Lenyel 1996) and Germany and Great Britain (Lane and Bachmann 1996). Apart from Europe, research on the connection between inter-firm relations and social institutions has been carried out in East- and Southeast Asian settings as well. Orrú, Hamilton and Suzuki (1989) provided tentative explanations for the distinct characteristics of both horizontal and vertical inter-firm relations in Japan by placing them against a historical-institutional backdrop. In addition, Nishida and Redding (1992) indicated connections between nationally distinct institutions and remarkable differences in the relevance of long-term relations and trust among firms in the textile industries of Hong Kong and Japan. Moreover, in a study of buyer-supplier relations in the traditional medicine industry of Indonesia, Rademakers (1998) linked a typical Javanese form of paternalism with distinct ways of inter-firm coordination.

The social construction of inter-firm relations has also received attention in accounts of the effects of a range of social institutions on characteristics of industrial organization (Dore 1973; Biggart and Hamilton, 1988; Groenewegen 1989; Lane 1989, 1992, 1995; Best 1990; Clegg 1990; Whitley 1990, 1991, 1992a, 1992b (ed.), 1994, 1996, 1999; Campbell, Hollingsworth and Lindberg (eds.) 1991; Hollingsworth, Schmitter and Streeck (eds.) 1994; Hollingsworth and Boyer 1997 (eds.); Groenewegen and Van Dijk 1994 (eds.); Boons 1995; Whitley and Kristensen 1996 (eds.); Sorge 1991). In these studies, nationally specific patterns of economic organization in various European, East Asian and US industries have been linked with the prevalent nature of social institutions

on a national level. As a consequence of the broad scope of these studies, however, the attention for the development of cooperative inter-firm relations has remained limited.

### 1.3 Problem definition

As indicated above, studies of the social constitution of inter-firm cooperation generally have been fragmented and partial in nature. Most studies address a limited number of attributes of inter-firm relations while forms of horizontal cooperation are largely neglected. Moreover, the influence of social institutions on the development of inter-firm relations is generally analyzed from a national perspective. In this way, the influence of social institutions that may be industry-specific in nature tends to be overlooked<sup>1</sup>. In light of the current state of development of the literature, the present study is aimed to articulate the influence of social institutions on the development of both vertical and horizontal cooperative inter-firm relations<sup>2</sup>.

Apart from the intended contribution to the literature on inter-firm cooperation, the proposed aim of this study is relevant to management as well. Firms are likely to gain advantage from a better understanding of the influence of social institutions that may either hinder or facilitate the development of cooperative arrangements. To put it in strategic management terms: inter-firm cooperation is likely to advance the competitive strength of firms, only if there is a sufficient 'fit' with institutional constraints that are nationally and/or industry-specific (cf. Sorge 1991: 182; Smitka 1991; Orrù et al. 1991:361-363; Schmitz 1997). Knowledge that supports management in dealing with such issues is considered particularly useful for firms with cross-border operations involving inter-firm cooperation, as the nature of social institutions may differ between countries. Moreover, this matter has become more relevant to management because of the shifts that firms are witnessing in their institutional environment as a result of the increasing globalization of industries, markets, regulations, and flows of capital.

<sup>1</sup> It is not unlikely that the nature and influence of social institutions, such as for instance the state, differs with respect to particular industrial sectors, both within and between countries (cf. Herrigel 1996; Whitley 1999). Consider, for instance, the role of the state in the defense and aerospace industries, agribusiness, and shipbuilding in countries such as the United States, France and Germany.

<sup>2</sup> Because the research is limited to relations between firms *within* an industry, no attention is paid to 'diagonal' cooperative relations, i.e., horizontal links between firms from different industrial sectors. This type of inter-firm collaboration is based on the advantages of combining knowledge and capabilities from two different industries in the development of new products or markets. Examples are forms of collaboration between firms from the micro processor and software industries (e.g.: Intel and Microsoft), and the links between firms from the automotive and petrochemical industries (see, for instance, Child and Faulkner 1998).



With regard to the aim of this study, the central question is stated as follows:

*What is the influence of key social institutions on the development of cooperative inter-firm relations?*

This question can be unraveled into three secondary questions.

The theoretical questions are:

1. What are the key attributes of vertical and horizontal inter-firm cooperation?
2. Which social institutions are likely to influence the development of cooperative inter-firm relations in different societies?

The empirical question is:

3. What is the nature of key social institutions that either hinder or facilitate the development of cooperative inter-firm relations?

The answers to questions 1 and 2 will be drawn from the literature and form the building blocks for the construction of an analytic framework. This framework will guide the field study and the subsequent analysis involved in this research, which are intended to provide the empirical foundations for the answers to question 3. Finally, the answers to this question will form the basis for answering the central research question.

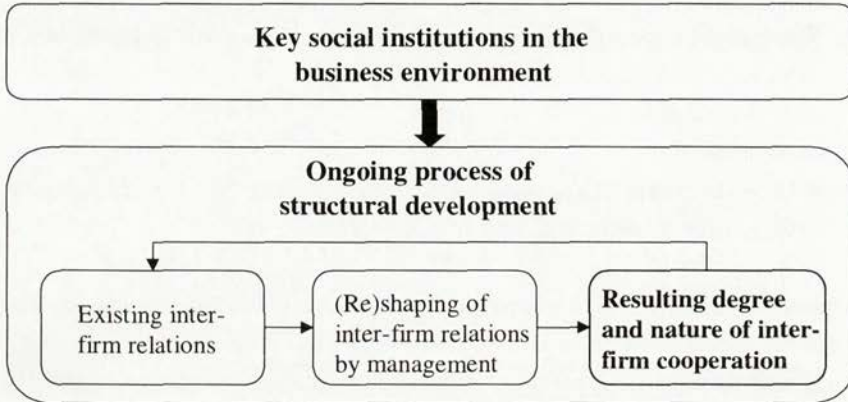
#### 1.4 Research design

The fundamental line of reasoning underlying this study is that social institutions channel and constrain the perceptions of managers who (re)shape the inter-firm relations of their company. In this way, the nature of key social institutions makes particular organizational solutions more likely than others. This, in turn, leads to the emergence of distinct patterns of inter-firm cooperation, either on national or industry level. As is displayed in the embryonic framework (see Figure 1.1), this is considered to be an ongoing socially structured process in which managers (re)shape the characteristics of inter-firm relations (cf. Sorge 1996: 67, 77).

It is important to emphasize here that 'embeddedness' (Granovetter 1985), i.e., reciprocal interdependence is implied in this framework, as opposed to one-way causalities between single social institutions and characteristics of inter-firm cooperation. In the framework, which will be developed further in Chapter 3, inter-firm relations form the central unit of analysis. The level of analysis is the industry, where patterns of inter-firm cooperation are explained by linking them with the nature of social

institutions (see Chapter 6). The social institutions considered particularly relevant in this respect will be drawn from the body of literature and will be labeled here as 'key social institutions.'

**Figure 1.1** Embryonic framework



Source: see text

Given the aim of this study, a cross-national comparison of cases is considered most appropriate. The cases need to contain detailed descriptions of the patterns of inter-firm cooperation and the nature of social institutions on an industry level within two different countries. In this way, the nature of social institutions, which are at least in part responsible for variations in patterns of inter-firm cooperation, may be identified<sup>3</sup> (cf. Whitley 1990; Nishida and Redding 1992).

The countries involved in this study are the Netherlands and the United Kingdom (UK). The two countries are located closely to each other, but nevertheless constitute quite contrasting institutional settings (Lane 1992; Van Iterson and Olie 1992).

In contrast to previous research on inter-firm relations, which is usually focused on the manufacture and service sectors such as the automotive, electronics, furniture, pharmaceuticals, and airline industry, the empirical setting of this study is the agri-food sector. In view of the serious challenge of feeding a world population which is expected to reach 6 billion in 1999 and is likely to approach 9 billion in 2050 (DESA 1998), it is

<sup>3</sup> The comparison of cases is addressed in more detail in Chapter 4.

considered relevant to pay attention to management issues in this sector. In order to enhance the focus of this research within the broad agri-food sector, the attention is aimed at the potato industry.

Considering the increasing liberalization of international trade in food products, it is important to point out that the potato industries of the UK and the Netherlands are not the subject of any EU market regulation<sup>4</sup>. The industry is known to be highly competitive and involves several multinational companies such as ConAgra, McCain, Pepsico, and Unilever. Nevertheless, the potato industries in both countries are constituted of a huge number of small and medium-sized companies with a clear domestic signature. Moreover, the potato industry has a number of interesting features with respect to the aim of this study. First, contrary to many other industries within the agri-food sector, the potato industry has a clear structure. The supply chain, 'from seed to plate,' is relatively short and the different production/distribution stages can easily be distinguished from each other. This property is helpful to keep a clear view of the empirical field during data collection and analysis. Second, this industry is known to comprise active trade associations and industry boards/associations/councils, which usually are quite accessible sources of secondary information. Third, many countries in Europe, Asia, the Americas, and the Middle East have a potato industry within their borders. This wide international presence provides a broad set of possible countries to choose from for future cross-national research, which may be relevant for replication purposes. Finally, the potato industry can be considered new to the area studies on inter-firm organization. Hence, this research enlarges the diversity of the empirical knowledge base in this field.

## 1.5 Overview of the thesis

This thesis consists of seven chapters. The structure of the thesis is outlined in Figure 1.2 (see next page). Following this introduction, Chapter 2 provides a closer examination of the concepts of inter-firm cooperation and social institutions. In addition, in this chapter the study will be positioned with respect to the many different research traditions involved in the area of inter-firm organization. Then, in Chapter 3, an analytic framework is constructed for the rigorous cross-national comparison of patterns of inter-firm cooperation. Based on this framework, propositions are formulated about

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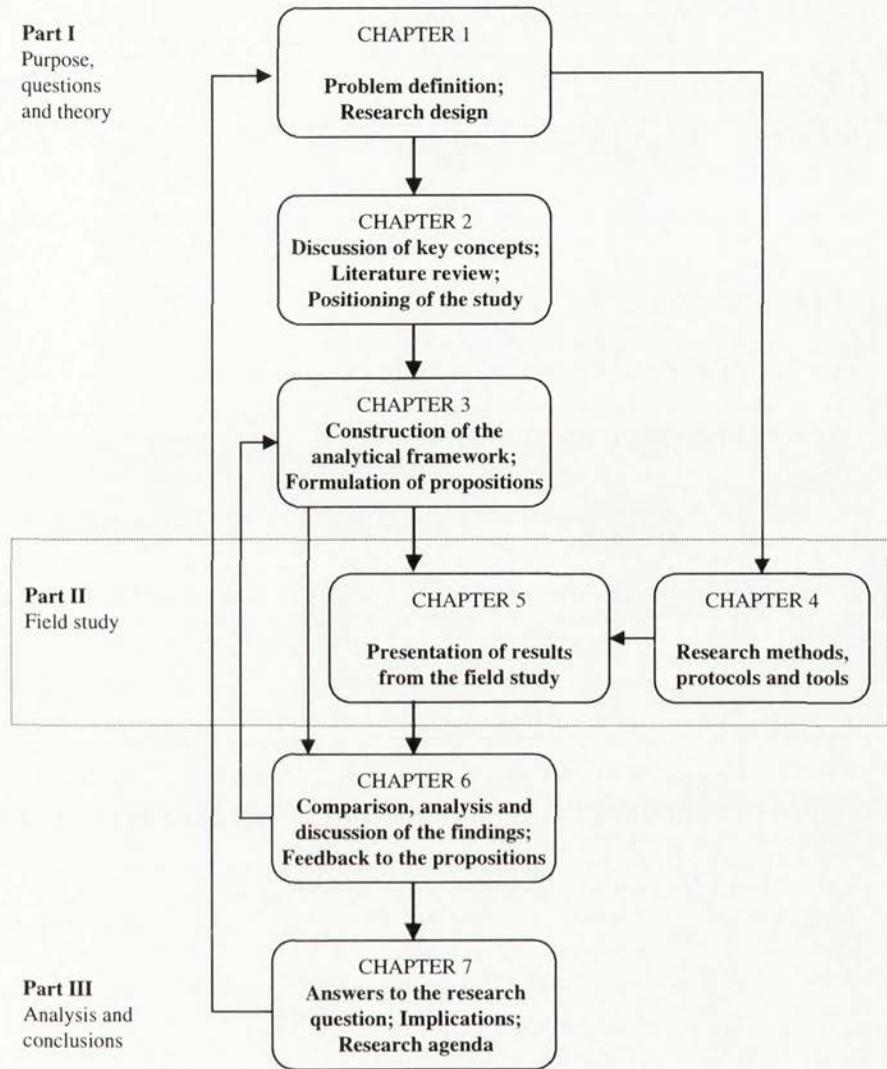
<sup>4</sup> Regarding the resistance of a majority of EU member states against any market regime for the potato industry, it is not very likely that this situation will change.



the influence of key social institutions on the development of cooperative relations between firms. Next, in Chapter 4, the methodological aspects of the empirical part of this study are discussed. Attention is paid to the comparison of cases as a way to conduct cross-national comparative research. In addition, details will be given of the field study conducted among firms in the Dutch and UK potato industries. In Chapter 5 the results of the field study are presented. Following a brief introduction of players and peculiarities of the UK and Dutch potato industries, attention is paid to historical developments in both industries. Furthermore, the characteristics of inter-firm cooperation are systematically described for each industry. The resulting insights make up the input for a comprehensive comparison of the patterns of inter-firm cooperation in the UK and the Netherlands. This is done in Chapter 6. The outcomes of this comparison are then analyzed and interpreted with the help of insights from previous research on inter-firm relations in their institutional context. Next, the results of the analysis compared with the propositions formulated in Chapter 3. Finally, in Chapter 7, the outcomes are used to provide answers to the central research question and the practical and theoretical implications of the research findings are discussed.



**Figure 1.2** Overview of the thesis: chapters, links, and loops



Source: see text



## Chapter Two

### INTER-FIRM COOPERATION: PERSPECTIVES, FORMS, and PARADIGMS

*This chapter is concerned with a review of the concepts of inter-firm cooperation and social institutions. A working definition of inter-firm cooperation is formulated, opposite perspectives on this type of governance are addressed and the relevance of cooperation for competitive advantage is discussed. In addition, attention is paid to inter-firm cooperation as a distinct form of governance versus markets and hierarchies. Next, a review is made of distinct forms of inter-firm cooperation that have been identified in past research on a variety of industries in different countries. Moreover, the major paradigms in research on inter-firm cooperation are addressed to position the present study vis-à-vis the dominant lines of thinking in this field. Finally, closer attention is paid to the different perceptions on institutions in the management and organization literature. This is done to explain what is understood by 'social institutions' in the present thesis and to further refine the positioning of this research with respect to the existing literature in this field.*

#### 2.1 Inter-firm cooperation

##### 2.1.1 A working definition of inter-firm cooperation

What is inter-firm cooperation? According to Richardson (1972: 886) the essence of cooperative inter-firm relations is the fact that the parties involved in an exchange relation accept some degree of obligation with respect to their future conduct<sup>1</sup>. Although

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<sup>1</sup> See also Sako (1992: 11) who developed the concept of 'obligational contractual relations' (OCR) that reflects cooperative inter-firm relations as opposed to 'arm's length contractual relations' (ACR).

'mutual obligations' certainly form an important aspect of inter-firm cooperation, it is considered here as too narrow a conceptual basis for a general (working) definition. However, notwithstanding the considerable attention that forms of inter-organizational cooperation have received during the past decade, definitions of inter-firm cooperation with a broader conceptual basis have remained scarce. Rather, most scholarly publications on this subject have been narrowed down to particular forms of inter-firm cooperation such as 'alliances,' 'networks' or 'supplier relations.' As a result, some variation exists as to how inter-firm cooperation has been perceived by different authors. This can be illustrated by taking a brief (and inevitably eclectic) look at some edited volumes on inter-firm cooperation that have been published quite recently (i.e., in the late 1990s).

In their book on cooperative strategy, Child and Faulkner (1998: 1) defined inter-firm cooperation simply in terms of the opposite of competition as a way of realizing objectives. Another view can be found in a volume edited by Huxham (1996: 7) which is devoted to cooperation within and between organizations. He points out that inter-firm cooperation is characterized by aspects such as 'work that is done in association with others' and 'mutual benefit.' In addition, in the same volume, Cropper (1996: 82) defines inter-firm cooperation as a mix of autonomy, integrity, and distinct identity in a positive inter-organizational relationship. In an edited volume about inter-organizational networks, however, Ebers (1997: 4) stresses different features of inter-firm cooperation. In his view, 'recurring exchange relationships' and 'joint decisions over the use of resources' are the key elements of inter-firm cooperation.

What is more interesting here is that the different views of inter-firm cooperation emphasize different aspects of the same phenomenon. These aspects can be classified according to the dimensions 'process' and 'structure' (see Table 2.1). The structural aspects and the processes that are typical of inter-firm cooperation are considered complementary to each other.

The combination of features displayed in Table 2.1 is considered sufficient to formulate a working definition of inter-firm cooperation, which, in turn, makes explicit how this phenomenon is perceived in this study. Inter-firm cooperation is considered as:

*A relationship between autonomous firms that is based on mutual obligations and objectives for a positive-sum game, and which involves recurrent transactions as well as joint control over activities and/or resources.*



**Table 2.1** Dimensions of inter-firm cooperation: processes and structures

<b>Process</b>	<ul style="list-style-type: none"><li>• Realizing objectives in a positive-sum game</li><li>• Recurrent exchange of goods/resources</li><li>• Joint activities</li><li>• Mutual obligations</li></ul>
<b>Structure</b>	<ul style="list-style-type: none"><li>• Two or more organizations involved</li><li>• Joint control over activities and resources</li><li>• The organizations involved remain autonomous</li></ul>

Source: see text

Firms, in this definition, are autonomous units of economic organization in the sense that they make their own strategic choices (Whitley 1987)<sup>2</sup>. Possible forms of joint control include, for instance, mutual shareholdings or projects that are carried out by a jointly managed workforce. Moreover, joint control over resources may involve some degree of financial risk sharing, but can also be limited to the sharing of production capacity, information, knowledge, and/or ideas. The mutual obligations give the parties involved some degree of assurance with respect to each other's future behavior. In addition, the positive-sum game implies that the objectives of the firms involved in the relationship are not in conflict with each other. This is not to say, however, that firms involved in a cooperative relationship always try to achieve the same aims. For instance, as a result of the cooperation between the automobile manufacturers Rover and Honda, Rover aimed for the learning of new design and engineering skills while Honda aimed for access to a supplier network and knowledge about the European market (Faulkner 1995). Another example is the cooperative relationship of Philips and Matsushita in the electronics industry. In 1952, on invitation of Matsushita, a joint venture for joint production purposes was established in which Philips brought in its leading technology. In the 41 years the joint venture remained in existence, Matsushita took advantage of the access to Philips' knowledge and capabilities, developed rapidly and transformed into one of Philips' most important competitors in the global electronics market<sup>3</sup>. Obviously, the aims and results of this cooperative arrangement were different for both firms.

<sup>2</sup> See also Chapter 3.

<sup>3</sup> Kerres in: Van der Zaal (1997: 14).

### 2.1.2 Conflicting perspectives on inter-firm cooperation

In the literature, inter-firm cooperation is looked at from both positive and negative points of view. Authors with a negative perspective on this phenomenon stress harmful practices such as collusion, conspiracy, and cartels that impede fair competition and industry development. The Scottish philosopher and economist Adam Smith (1776) can be regarded as an early proponent of this view, asserting that: *'People of the same trade seldom meet together,...but (if this happens) the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.'*

In more recent literature, inter-firm cooperation has been recognized as a possible barrier to fundamental changes within industries and firms (Whitley 1994; Lane 1996) and to organizational innovation (De Man 1996: 188). Moreover, cooperative inter-firm relations are seen to involve the risk of declining results owing to clique formation, overall fragmentation (Granovetter 1973), inertia (Lane and Bachmann 1996: 391), and conflicts (Huxham 1996: 4).

In contrast, proponents of the positive view on inter-firm cooperation stress the advantages of partnerships, coalitions, and alliances. In general, cooperation is seen to enhance the competitive power of (groups of) firms and to facilitate industry development. In tune with this, Best (1990: 19) asserted that most of the negative aspects of inter-firm cooperation result from poor management. On the contrary, properly managed forms of inter-firm cooperation are seen to contribute to a stronger competitive position of the firms involved (Porter 1990; Sako 1994: 35; Child and Faulkner 1998: 2; Van den Bosch, De Man and Elfring 1997: 56), industry development and cohesion (Best 1990; Schmitz 1996), innovation of products, processes, and organizations (Håkansson 1998; Finn 1996). Inter-firm cooperation is also considered useful to obtain a better view and increased responsiveness with regard to developments in the business environment (McEvily and Zaheer 1997b; Lütz 1997: 230). Without disregarding the possible negative aspects of inter-firm cooperation, it is the positive perspective that dominates this study. In other words, inter-firm cooperation is viewed as a potential source of competitive advantage and industry development. In line with this, the next sub-section will discuss the relevance of inter-firm cooperation as a possible way to gain competitive advantage.



### 2.1.3 Inter-firm cooperation and competitive advantage

In the last half of the 1990s attention to inter-firm cooperation in management and organization literature has surged dramatically. This is reflected in the rapidly increasing number of books on inter-firm cooperation and of special issues and articles regarding this subject, which are published in international journals such as *Organization Studies* (1998), *Organization Science* (1998), *Academy of Management Journal* (1995), and *Strategic Management Journal* (1998)<sup>4</sup>. The general conclusion that can be drawn from this rapidly expanding body of literature is that new and higher demands from customers combined with increased competitive pressures are urging firms to engage in cooperative arrangements<sup>5</sup>. Below, the key demands and pressures will be discussed more in detail.

#### *Innovation and responsiveness*

Many industries are being confronted with consumers' concerns about product safety and environmentally sound ways of production. In addition, consumers increasingly demand variety, convenience, and customization. As is usually the case in competitive mass markets, there is a continuous pressure from customers for industries to meet higher standards and develop new products, while only the 'early mover'<sup>6</sup> producers can take advantage of premium prices. Due to the inherent shortening of product life cycles, the innovation of products and processes has become a more crucial competitive factor than (nevertheless important) cost cutting and productivity (Hage and Alter 1997: 101). The pressures for rapid innovation push firms to increase their research and development efforts. Moreover, firms are urged to improve their adaptive capabilities in ways such as *monitoring the environment for technological and product change*, and the (timely) development and implementation of competitive responses. Clearly, innovation and responsiveness can require high investments but are essential to the survival of firms operating in present-day competitive environments. Indeed, firms which are not able to respond rapidly enough to new developments in their markets run the risk of losing considerable market share and finding themselves up for sale. However, firms are not always able to meet the present-day demands for continuous innovation and high responsiveness on their own. For instance, small firms are likely to face the

<sup>4</sup> See also Ring (1998).

<sup>5</sup> See Rademakers and McKnight (1998) for a case study about this subject on the Dutch potato industry.

<sup>6</sup> Early movers: firms that are first with the introduction of a new or better product/service.

disadvantages of limited resources for research, development, and monitoring, while large multinationals in particular cope with the problem of creativity and responsiveness. Hence, inter-firm cooperation is broadly seen as a way to facilitate innovation and market responsiveness for both large and small firms. Cooperative arrangements between firms are seen to contribute to the spread of costs, the shortening of product development cycles, and the development of a higher commitment of the (supply chain) parties involved (Lane 1996; Schmitz 1996). Moreover, cooperation enables firms to specialize, to 'learn by transacting', and to exploit opportunities to the mutual benefit of the parties involved (Sako 1998). In addition, cooperation is seen as one of the most effective and efficient ways to organize for innovation<sup>7</sup>. For instance, as will be shown in Chapter 5, joint pre-competitive projects imply a more efficient use of research resources as it prevents firms from re-inventing the same wheel. Moreover, in markets where creativity and high responsiveness to trends is a key to attracting and retaining customers (such as the entertainment, fashion, and software industries), large firms, in particular, seem to take advantage of cooperative arrangements with highly specialized and innovative small firms (see for instance Huygens 1999).

#### *Transactional efficiency*

Inter-firm cooperation is also considered as a possible way for firms to enhance their transactional efficiency. For instance, based on her findings from a cross-national comparison of Japanese and British printed circuit board industries, Sako (1998: 90) points out that cooperative inter-firm relations are likely to enhance business performance through the reduction of transaction costs due to the reduced need for (costly) formal safeguards. Moreover, learning-effects that are likely to emerge in more durable cooperative relations enable suppliers to become familiar (and adjusted) to the specific needs of their customers, which makes the transactions between them more smooth and reliable. Indeed, there is a reduced need for negotiations concerning the exchanges involved or other efforts necessary to realize a reliable supply, which is likely to enhance speed of delivery (Humphrey and Schmitz 1998).

#### *Strategic advantages*

Inter-firm cooperation can be attractive from a strategic viewpoint as well. For instance, small and medium-sized firms can take advantage of joint action in the development of

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<sup>7</sup> Jorde and Teece (1992) in: Gutterman (1997: 373).



export markets (see e.g., Chapter 5). Moreover, firms that have the ability to rely on cooperative arrangements do not have to acquire equipment and capabilities for an entire production process. This implies that cooperation enables focused investments and specialization as firms can leave some stages of the production process to other entrepreneurs (Schmitz 1996). Such arrangements also make it possible for firms to follow a 'bootstrap strategy' (Levy and Kuo 1991), i.e., breaking down investments into smaller riskable steps. This possibility of limiting risk through cooperation is regarded as a facilitating factor to overall industry development.

Another strategic aspect of inter-firm cooperation concerns the enhancement of the flexibility of the firm (cf. Volberda 1998). Through cooperative arrangements firms can remain more flexible with respect to variations in market demands than vertically integrated firms. At the same time, cooperative arrangements can be used by firms to secure their supplies and to take early advantage of improvements of products or production processes by different supply partners (Smitka 1991).

Cooperation can also be a basis for firms to improve each other's performance by linking complementary capabilities, skills, knowledge, and information (Richardson 1972; Child and Faulkner 1998). In this light, the relevance of cross-border inter-firm cooperation, as a result of the increasingly internationalizing markets and industries, can be viewed in terms of access to capabilities, knowledge, and skills as well. Cooperation with local firms is likely to enhance the ability of companies that invest in new activities abroad to adapt effectively to different circumstances in different countries (cf. Child 1998).

Finally, firms can increase their market power by bundling their input and/or output. Such forms of horizontal inter-firm cooperation are, for instance, exemplified by marketing co-operatives that help their members to build countervailing power and avoid being played against each other in markets characterized by an abundance of suppliers and relatively few buyers (Van Dijk 1997; Veerman 1998).

Put briefly, inter-firm cooperation is a highly relevant strategic issue to firms that seek to enhance or retain their competitive strength. Cooperative arrangements enable firms to compete better in rapidly evolving domestic and world markets by gaining from enhanced innovativeness, higher market responsiveness, lower costs, raised quality levels, mutually complementary capabilities and improved strategic positions.

summary -  
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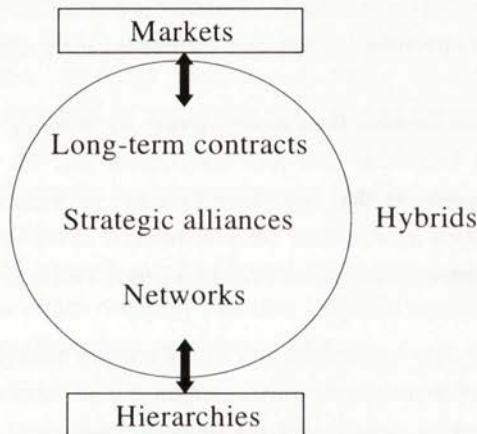
## 2.2 Cooperative arrangements, markets, and hierarchies

There have been many debates about how forms of inter-firm cooperation can be distinguished from other forms of governance. Three distinct lines of thinking will be addressed here: first, the market-hierarchy perspective; second, the contrasting view that inter-firm cooperation is an entirely distinct form of governance; and third, the 'intermediate' view that markets, hierarchies, and inter-firm cooperation should be conceptualized as ideal types of economic organization.

### 2.2.1 Markets, hybrids, and hierarchies

A dominant line of thinking about the distinction between different forms of governance stems from proponents of the market-hierarchy dichotomy with leading scholars such as Coase (1937) and Williamson (1975; 1985). In this dichotomy, forms of inter-firm organization are conceptualized as a 'hybrid' and 'temporal mode of governance'<sup>8</sup> (Williamson 1985). The hybrid is considered neither a market nor a hierarchy, but something in between. A visual representation of this conceptualization is displayed in Figure 2.1.

**Figure 2.1** The market-hierarchy dichotomy



Source: see text

<sup>8</sup> The notions 'governance structure,' 'governance mode' or 'form of governance' are ways to describe forms of economic organization, i.e., ways to coordinate and control exchange relations.

As is shown, markets (comprised of impersonal arm's length relations between firms) and hierarchies (i.e., integrated formal organizations comprised of authoritative relations) are put at the extremes of a continuum. The 'hybrid' forms of governance are placed in between. The reasoning is that markets, via hybrid forms of governance, may evolve into hierarchies and vice versa (Miles and Snow 1992: 148). Non-incremental shifts are considered possible as well, i.e., the immediate transformation from market to hierarchy (or the other way around) as a result of strategic 'make or buy' decisions based on efficiency considerations (Williamson 1991: 82).

Nevertheless, despite the theoretical usefulness of this market-hierarchy dichotomy, problems arise in empirical applications of this framework. It appears difficult to define where the borders of a firm end and where the 'gray zone' begins that separates it from pure markets. Moreover, due to the restricted meaning of formal definitions of markets and hierarchies, almost every organization in empirical reality can be considered as a hybrid governance structure (Hennart 1993; Hamilton and Feenstra 1995; Grandori 1997).

### **2.2.2 The third governance mechanism**

A very different line of thinking in the literature on inter-firm cooperation rejects the principles of the market-hierarchy dichotomy. Instead, the prevailing view is that inter-organizational arrangements are entirely distinct governance mechanisms. Therefore, they cannot be placed at the extremes on a continuum of markets and hierarchies. According to this view, many different types of inter-organizational arrangements have been identified as a 'third form of governance' and labeled accordingly and include, for instance, networks, clans, democratic poliarchies, and constitutional ordering (Grandori 1997: 30). On the one hand, this view can be considered useful to the discovery of alternative, authentic, and/or innovative governance structures that otherwise may remain unnoticed. On the other, such an approach may lead to the emergence of a broad set of isolated concepts and a fragmented body of knowledge. The argument is that, without the application of a more general alternative framework, the resulting lack of a 'common language' makes it very difficult to combine/compare the outcomes of research on different governance forms.



### 2.2.3 Ideal and real types of governance

Apart from the conflicting views of how governance mechanisms should be conceptualized, a 'middleground' approach has been proposed by Ebers and Grandori (Grandori 1997: 44; Grandori 1998; Ebers 1998: 30; Ebers and Grandori 1998: 270). Rather than denying the existence of markets, hierarchies, and networks as distinct forms of governance, they view them as *ideal types*<sup>9</sup>. These ideal types, in turn, enable the identification of *real type*<sup>10</sup> forms of governance (cf. Van den Bosch and Van Wijk 1998). For the purpose of this 'Weberian' approach<sup>11</sup>, constitutive characteristics of governance structures have been identified including 'lower level ties' (i.e., the content of inter-firm relations), property rights, and coordination mechanisms. These characteristics are used to define the ideal-types of markets, hierarchies, and networks. In addition, they form the basis of a framework for the analysis and/or comparison of different forms of governance, be it market-like, hierarchy-like, or network-like entities. Table 2.2 shows an adjusted version of this framework<sup>12</sup>.

The framework of ideal types is considered useful to order the broad range of 'real type' governance structures that can be found in different countries. To underscore the existence of the remarkably wide variety of 'real type' forms of governance that can be found in free market economies, the framework in Table 2.2. will be used for a brief review of 15 distinct market-, hierarchy-, and network-like organizational forms. Given the wide scope and rapid development of research in this field, it must be noted that the review is certainly not considered inclusive.

<sup>9</sup> In a quite similar fashion, Thompson, Frances and Levacic (1991) have used the concepts of markets, hierarchies and networks as 'models' that can be used as a kind of sifting device for empirical analysis.

<sup>10</sup> Spiethoff (1953: 459) defines 'real types' as: '*reflecting the sum total of actually existing uniformities, everything that is essential in relations to a given phenomenon*' (accentuation by the author).

<sup>11</sup> This approach has been inspired by Max Webers' view of empirical research, expressed in Volume 1 of his 'Economy and Society' (1978:18, edited and translated version): '*It is necessary to know what a 'king,' an 'official,' an entrepreneur,' a 'procurer,' or a 'magician' does, that is, what kind of typical action, which justifies classifying an individual in one of these categories, is important and relevant for an analysis, before it is possible to undertake the analysis itself.*'

<sup>12</sup> There is some variation in the way Ebers and Grandori treat the relevance of 'lower level ties' with respect to 'property rights' and 'coordination mechanisms.' In addition, many details are used for the characterization of the three ideal types of markets, hierarchies and networks. The inherent complexity of these ideal types hinders their application in empirical analysis. Hence, in the matrix developed here the ideal types are re-interpreted and presented in a more condensed way.

*Market-like forms of governance*

A real-type form of market-like governance is the (*arm's length*) *spot market*. This governance mechanism stands for impersonal ad-hoc exchange relations where the price is a major criterion for the transaction of standardized commodities between independent buyers and sellers (Whitley 1992b: 12; Biggart and Hamilton 1992: 473). Examples are the trade of industrial products such as memory chips, and bulk goods such as crude oil, ore, soybeans, and oranges.

**Table 2.2** Markets, hierarchies, and networks as ideal types

CHARACTERISTICS	IDEAL TYPES		
	Market	Network	Hierarchy
<b>Resource flows</b>	<i>Infrequent exchange of goods, services, and/or money</i>	<i>Recurrent exchange of goods, services, and/or money</i>	<i>No exchange, but pooling of resources</i>
<b>Information flows</b>	<i>Limited Transactional: price, quality, quantity</i>	<i>Moderate-extensive wider spectrum than transactional information</i>	<i>Extensive wide spectrum</i>
<b>Mutual expectations</b>	<i>Formal, limited to the contractual terms of exchange</i>	<i>Both formal and informal expectations</i>	<i>Formal, specified expectations</i>
<b>Property rights</b>	<i>Full control Over own resources by the actors involved</i>	<i>Joint control in various degrees over resources owned by the actors</i>	<i>Joint control over resources, based on specifications.</i>
<b>Coordination Mechanisms</b>	<i>Price</i>	<i>Negotiation (dynamic) Conventions (static)</i>	<i>Authority</i>

Adapted from Ebers (1997: 20-23) and Grandori (1997: 22-37)

Another form of governance close to the ideal-typical market is *sub-contracting*, which can be considered as a 'market based organizational form' (Jarillo 1993: 13). Examples of sub-contracting are reflected in the way major American car manufacturers govern their supplies. These corporations tightly coordinate a constellation of suppliers and

assemblers of parts without directly owning or authoritatively controlling them. The inter-firm relations are coordinated on the basis of price and customized specifications and involve high degrees of information exchange and recurrent transactions. As Mudambi and Helper (1998: 776) pointed out, the mutual expectations in such forms of governance are largely characterized by a formal structure of commitment (i.e., highly specified contracts), while the relations involved can be considered close but adversarial.

### *Hierarchy-like forms of governance*

Different real-type hierarchies can be identified as well. First, the *functional organization* exists in different varieties ranging from simple hierarchies to divisionalized corporations (see, e.g., Chandler 1962). Such organizations are divided into different units that are grouped by function (e.g. Gasunie), market (e.g. KLM), product (e.g. Philips), project (e.g. NASA), or geographic area (Mintzberg 1992: 162; Volberda 1998). The vertical flows of information between the different units are extensive, while the coordination of the activities happens through authority relations. Most activities of these organizations are fully owned. However, it is very difficult to determine the exact boundaries of these functional organizations (Van den Bosch and Van der Zaal 1994) as many of them also incorporate activities that are co-owned with other firms and involve joint control over resources and extensive information flows.

Quite different hierarchy-like forms of governance are the intra-firm networks such as the 'federated enterprise' and the South-Korean 'chaebol.' The *federated enterprise* is seen as a novel organizational concept and is, for instance, experimented with by IBM. This huge multinational corporation has turned away from the principles of a tightly integrated hierarchical organization as it transformed itself into a federation of fourteen mutually independent intra-corporate companies (Child and Faulkner 1998: 5). The fundamental difference with regard to more conventional divisionalized enterprises is the ability of the intra-corporate companies to cooperate with each other and the lesser importance of coordination via hierarchical channels. However, an in-depth study of the Dutch Rabobank revealed that the relative importance of authority as a coordination mechanism in intra-corporate networks is likely to increase with the degree of diversification among the units involved (Van Wijk and Van den Bosch 1999).

The *chaebol* is a distinct form of governance of South-Korean breed. The 'chaebol' are very large and highly self-sufficient organizations that encompass a broad range of different industries, ranging from shipbuilding to the processing of dairy products and



are comprised of a large number of vertically integrated companies (Zeile 1996: 256). They often have a trading firm at the center and are involved in insurance services but are not permitted to own banks. The high degree of vertical integration of the companies comprising a 'chaebol' is mostly maintained by family ownership. Moreover, among the members of the boards of directors strong ties exist that are based on family, region of birth and high-school alumnae (Kim 1996: 235) indicating that mutual expectations are certainly not always based on formal and specified rules. In tune with this, paternalist authority relations (rather than authority based on formal rules and procedures) are important coordination mechanisms (Janelli 1993). The high degree of self-sufficiency of the 'chaebol' is, among others, based on the easy exchange of technology, information, and personnel among the companies involved.

#### *Network-like forms of governance*

A vast range of different 'real types' of inter-organizational governance can be found within and across different countries. The *cooperative*, to begin with, is a 'horizontal' form of inter-firm organization that is particularly well developed in the Dutch agri-food industry (Veerman 1998: 71). The (marketing) cooperative is comprised of a group of autonomous firms that pool some of their resources and market their output via a jointly owned organization. Although the members jointly own the cooperative and have joint control via a board of members, they have no individual ownership of any part of the organization. Membership in the cooperative is based on formal and highly specified contracts that, among others, regulate supply obligations and the consequences of discontinuing membership.

The *joint venture* is a formal, either vertical or horizontal form of governance wherein two or more autonomous firms have joint control over a common enterprise on the basis of joint ownership (see, e.g., Kogut 1988). Reasons that firms engage in this way of pooling resources range from gaining access to new markets to the joint development or production of new products or technologies. Hence, information flows tend to be extensive.

Reasons of firms to engage into a *strategic alliance* can be much the same as for a joint venture. However, in contrast to a joint venture a strategic alliance does not involve a jointly owned enterprise. Rather, alliances are established to pool resources or capabilities in order to achieve a common goal such as the joint development, manufacturing or marketing of a new product. For instance, small entrepreneurial firms may engage into alliances with large multinationals to obtain, for instance, access to



extensive production and distribution systems. The large firms, in turn, may take advantage of the creative capabilities of the small firms they are working with and, possibly, buy out the owners in a later instance (see, e.g., Huygens 1999). This form of inter-firm cooperation is much in line with the 'value-added partnership' (Johnston and Lawrence 1988) consisting of cooperative supply chain relations between fully autonomous firms; considered a substitute for vertical integration.

A *consortium* is a formal and often horizontal form of governance, which is also intentionally temporal in nature. Firms in a consortium jointly control and contribute a range of resources, competencies, and equipment necessary to realize large-scale projects (Grandori 1997: 42) such as the construction of airports, railroad tracks or barrages. The coordination of the activities usually happens by negotiation, while the firms involved share the risks that come with the joint project.

The outsourcing-based *strategic center* to manage a web of partners can be considered a distinct network-like form of governance with hierarchy-like traits (Lorenzoni and Baden-Fuller 1995: 148; Lomi and Grandi 1998). Examples of such networks are multinationals such as Apple, Nike, Sun, McDonald's and Benetton. This form of governance differs from arm's length subcontracting practices as the 'core firms' in such networks are involved in developing the competencies of the partners, borrowing and lending new ideas, and encouraging intra-network competition in a positive manner. The principles of the 'strategic center' are exemplified by Benetton in the fashion industry and involve among other things, thousands of shops and hundreds of subcontractors in production. In this inter-organizational arrangement a core firm orchestrates, in a quasi-hierarchical way, extensive flows of resources and information of a wide range of similar, small, and highly specialized autonomous family firms. Formal contracts play a complementary role in this network and expectations based on informal types of trust are considered much more important (Lorenzoni and Baden-Fuller 1995: 155).

A typically Japanese network-like form of governance, which is in some respects quite similar to the 'strategic center' described above, is the *keiretsu*. The 'keiretsu' consists of hierarchical, multi-tier production ties among (formally) autonomous companies and is often with a large industrial firm in the center that covers a range of different industries (Orrù 1996: 208). Examples of firms that center such vertical networks are Mitsubishi, Kawasaki, and Toyota. The flows of resources between the firms are coordinated on the basis of mutual obligations and involve high degrees of risk sharing and information exchange. Moreover, the major firms that are part of the 'keiretsu' are often linked with each other through cross-shareholdings.

The *kigyo shudan* is another distinct Japanese form of governance. These network-like structures are horizontally organized and resemble large inter-market groups of autonomous firms (which, in turn, can be part of a 'keiretsu') allowing for extensive flows of information and resources among its members. The firms making up a 'kigyo shudan' can be tied to each other in various degrees and multiple ways, including ties via president's clubs, mutual shareholdings, and mutual obligations (Orrù 1996: 202).

A 'real type' governance structure, mainly comprised of small firms, is the '*industrial district*.' Such a 'district' is comprised of a spatial clustering of resources and capabilities of (mainly) small firms. In the past, but also in more recent times, industrial districts have emerged (and ceased) across a range of countries including the 'Marshallian districts' in England<sup>13</sup>, the Baden-Württemberg region in Germany (Herrigel 1993), the various districts in Northern Italy (Best 1990; Piore and Sabel 1994), the Sinos valley in Brazil, and the cluster of manufacturers near Sialkot in Pakistan (Humpfrey and Schmitz 1998). All these 'districts' do (or did) compete successfully in international markets. In fact, the regional clusters of small firms attain competitive properties of big firms such as market power and economies of scale, while remaining highly flexible and without being reduced to subcontractors for products designed by large firms (cf. Best 1990: 225). Obviously, cooperation between the small and autonomous firms within these districts involves extensive flows of information, goods, services, as well as joint control over resources owned by the partners. Moreover, both formal and informal expectations underpin the exchanges between the small (family) firms, while in some countries either voluntary or quasi-governmental business associations are involved in the coordination of the relations (Best 1990; Schmitz 1996). Networks of Chinese family businesses, also labeled as *bamboo networks* (Weidenbaum and Hughes 1996) are the dominant inter-organizational structures in many East- and Southeast Asian nation states. These networks are generally ad-hoc and loose in nature and comprised of autonomous family-owned firms. Joint control over resources is limited. The flows of resources and information between these firms are largely coordinated through a combination of negotiations and conventions between the owners, who are linked to each other through informal, personal relations (Redding 1990).

Finally, the *association-based network* is comprised of a constellation of firms that are member of the same trade- or industry association. According to Child and Faulkner (1998: 9) this is one of the most loose network forms, jointly controlled by the

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<sup>13</sup> Marshall (1920) in: Best (1990: 233).



members, and representing a communication system that enables firms to keep informed about the latest developments in their industry. Such networks largely function on the basis of both formal and informal conventions between the members. However, in some countries the business associations constitute an important part of industrial districts (discussed above), either or not based on compulsory membership and the authority to impose regulations. In tune with this, and as will be shown in Chapters 3 and 5 of this thesis, networks centered by trade- and industry associations can be tighter and more active than suggested by Child and Faulkner.

#### **2.2.4 Summary**

In this section three major ways to conceptualize of inter-firm cooperation have been addressed: the market-hierarchy dichotomy, the third governance mechanism and ideal types of governance. In addition, a range of distinct 'real type' governance structures have been discussed, showing that 'real-type' network structures tend to combine ideal-type network characteristics with features of markets and hierarchies. Moreover, the range of distinct forms of governance discussed here indicates the vast heterogeneity that exists in present-day forms of inter- and intra-firm organizational arrangements within and across different industries in different countries. The provision of a comprehensive overview of the literature on 'real-type' governance structures, however, is beyond the scope of this study. Such an endeavor would require a journey through time, from the 19th century till present, and through the scattered literature anchored in a range of different disciplines and sub-disciplines that in some way or another touch upon this multi-sided issue. Nevertheless, as will be shown in the next section, scholars have made initial attempts to identify patterns and structures in the broad field of academic literature on inter-firm cooperation.

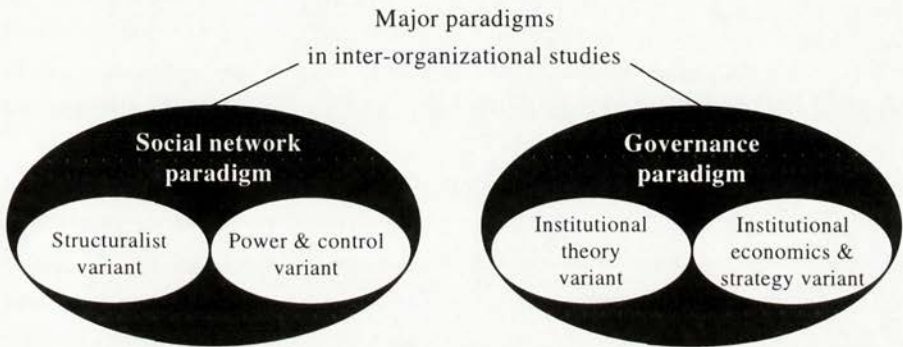
### **2.3 Paradigms and approaches**

#### **2.3.1 Diversity and unity in research on inter-firm cooperation**

The literature on inter-firm cooperation involves a broad range of different schools of thought, (sub-)disciplines, and methodologies (cf. Grandori and Soda (1995); Grandori 1998; Koza and Lewin 1998: 255; Gulati 1998: 294). Biggiero (1998: 12), for instance,

identified 10 different major theories<sup>14</sup>, ranging from sociological and neo-classical approaches to strategy studies. Moreover, Oliver and Ebers (1998) have made a detailed account of this fragmented body of literature. Based on an analysis of 158 articles on inter-organizational relations in major management and organization journals, they identified, among others, 17 distinct theories, 5 contrasting methods, and 6 different levels of analysis<sup>15</sup>. Despite this diversity, they argued that not more than 2 distinct research paradigms<sup>16</sup> both differentiate and unite the broad field of inter-organizational studies. These paradigms have been labeled as 'the social network paradigm' and the 'governance paradigm' and include two major variants each (See Figure 2.2).

**Figure 2.2** Paradigms and approaches in inter-organizational studies



Source: see text

<sup>14</sup> The theories identified include resource dependence theory, network theory, approaches to strategic alliances, neo-institutionalism, population ecology, evolution theory, transaction cost theory, the structure-conduct-performance approach, agency theory, and game theory (Biggiero 1998: 10).

<sup>15</sup> The theories identified by Oliver and Ebers differ somewhat from Biggiero's work and include resource dependence theory, network theory, political power theory, exchange theory, institutional theory, contingency theory, strategic approaches, decision making theory, transaction cost theory, industrial organization theory, agency theory, population ecology theory, bargaining theory, evolutionary theory, structuration theory, labor law theory, and industrial marketing theory (see Oliver and Ebers 1998: 574-575 for a brief description of the principles of these theories). The different methodologies include empirical, quantitative, cross sectional, longitudinal, and qualitative methods. The levels of analysis identified are the individual, groups of individuals, the organization, groups of organizations, regional/industries, and societies.

<sup>16</sup> The notion of 'paradigm' (Kuhn 1962) has been defined in multiple ways (Masterman 1974: 61-65) and has been used accordingly by many scholars. In their article Oliver and Ebers seem to use the concept paradigm in the sense of a 'disciplinary matrix' (Kuhn 1974: 271) or 'puzzle-solving device' (Masterman 1974: 68). They identified four major 'paradigms' of which two pairs show relations and areas of overlap. A more strict application of the notion 'paradigm,' with incommensurability of theories as a major property, leaves us in this case with two paradigms in two variants each.



Below, both paradigms and their variants will be discussed more in detail to determine the position of the present research with regard to major schools of thought in the literature on inter-firm cooperation.

### 2.3.2 The social network paradigm

The social network paradigm includes two major variants: the 'structuralist' and the 'power and control' approaches. First, research of the 'structuralist' variant is focused on the impact of network structures and positions on the behavior and performance of the organizations involved (Ebers and Oliver 1998: 568). Examples of key concepts used by structuralists are, for instance, 'structural holes' and 'bridging ties.' A structural hole is a relationship of non-redundancy between two organizations, meaning that they do not share the same contacts in a network (Burt 1992: 65)<sup>17</sup>. Bridging ties are provided by actors that link together two organizations that otherwise would be disconnected. In other words, a bridging tie constitutes the only link between otherwise disconnected nodes in a network (Granovetter 1973).

Second, research of the 'power and control' variant is also focused on the structural attributes of networks, but combines this with properties of individual firms. Key concepts in this respect are 'resource dependence,' and 'centrality.' Resource dependence refers to the environmental dependencies (i.e., gaining, managing, and controlling external resources) of firms, which are believed to have an impact on their power in inter-organizational systems (Pfeffer and Salancik 1978)<sup>18</sup>. The concept of centrality is concerned with the power (i.e., control and dependence) implications of the position that organizations occupy in a network and is, among others, measured by counting the number of adjacent links, direct and indirect links, and mediating positions (Freeman 1979; Brass and Burkhardt 1992)<sup>19</sup>.

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<sup>17</sup> The idea is that organizations can build both more efficient (less contacts to maintain) and effective networks (more diverse) if they optimize the number of structural holes in their network (Burt 1992: 67).

<sup>18</sup> See also Van der Zaal (1997: 72-75) for a detailed account of this concept.

<sup>19</sup> For example, a firm that is in the center of in a star-shaped network of organizations has a high degree of 'centrality.' With respect to the other organizations, such a firm has a strong mediating position and also the most direct and shortest links in the network. Hence, this firm is considered to have the most powerful position in the network.

### 2.3.3 The governance paradigm

The governance paradigm is comprised of two major variants as well. The first variant is based on institutional economics and strategy approaches that involve 'how to' questions about such issues as organizing networks (Miles and Snow 1992), managing alliances (Doz 1996), enhancing efficiency (Williamson 1991), and gaining competitive positions (Porter and Fuller 1986). Key notions in these approaches include transaction costs, ownership, contracts, economic institutions (Williamson 1985; North 1990), games (Nalebuff and Brandenburger 1996), resources and capabilities (Richardson 1972; Lorange and Roos 1992: 6; Håkansson and Johanson 1993: 36), and performance (Gulati and Lawrence 1997).

The second variant, (neo-)institutional theory (or: economic sociology), is focused on the influence of the institutional environment on the development of inter-organizational relations. Issues tackled on the basis of this approach include the development of distinct forms of inter-firm organization in different geographical areas or industries (Nishida and Redding 1992; Whitley 1999; Lane 1996; Herrigel 1996), the institutional embeddedness of business networks in East- and Southeast Asia (Hamilton 1996; Orrù et al. 1997), and the identification of distinct coordination mechanisms within specific industries and national settings (Campbell et al. 1991; Hollingsworth et al. 1994; Rademakers 1998)<sup>20</sup>. Overarching concepts in this line of research are 'business systems' (Whitley 1992a - 1999), 'industry recipes' (Spender 1989), 'industrial orders' or 'social systems of production' (Hollingsworth et al. 1994; Lane 1996), and 'social institutions' (Whitley 1992b: 19-27)<sup>21</sup>.

On the basis of the above discussion it is not difficult to position the present research within the existing literature. As was discussed in Chapter 1, the present thesis is concerned with the influence of key social institutions on the development of cooperative inter-firm relations. Regarding its focus on the influence of the institutional environment, the present study can be placed in the governance paradigm, and more in particular in the institutional theory variant.

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<sup>20</sup> See also Chapter 1.

<sup>21</sup> The meaning of these concepts will be discussed in the next section and in Chapter 3.

## 2.4 Social institutions

Obviously, 'institutions' are a central concept in research within the 'institutional theory' variant of the governance paradigm. This raises the question: What is understood by 'institutions' in the management and organization literatures? Moreover, what is the perspective adopted in the present study?

### 2.4.1 Institutions defined

On the basis of a broad review of the early and more contemporary 'institutionalist' literature, Scott (1995: 33) has formulated a helpful 'omnibus' definition of institutions.

His definition states that:

*'Institutions consist of cognitive, normative, and regulative structures and activities that provide stability and meaning to social behavior. Institutions operate at multiple levels in society and are transported by various carriers - cultures, structures, and routines- and they operate at multiple levels of jurisdiction.'*

Put briefly and in more popular terms, institutions can be regarded as 'rules of the game' that reduce uncertainties by structuring interactions between people (North 1990: 3). In line with this, institutionalization is the process of structuring and stabilizing interactions between social actors (Van Doorn and Lammers 1959). In addition, institutions emerge as a result of successful solutions to practical problems of interaction that have been reproduced and gained a 'taken for granted' and routine quality over time (Garfinkel 1967; North 1990; Clegg 1990; Lane 1996).

### 2.4.2 Diverse perspectives on institutions and economic organization

As indicated in the definition by Scott (1995), there are different categories and carriers of institutions. Table 2.3 displays an overview of possible types of institutions that reflect different carrier-category combinations.

Institutionalists have in common that they attempt to explain the process by which institutions shape organizational structure and action (Lane 1995: 10). However, regarding the broad range of possible types of institutions (see Table 2.3) it is not very surprising that in the literature different aspects of institutions have been emphasized by different scholars. Scott (1995: 57-59) has showed this in a very convincing way. At least 8



different major schools can be distinguished, reflecting a broad range of different institutional perspectives (regulative, normative, cognitive), levels of analysis (ranging from world systems to organizational sub-systems), and concepts (e.g., populations, industries, etc.)<sup>22</sup>. For instance, research by the mainly American scholars of the 'new institutionalists' school has been largely focused on the cognitive aspects of institutions in non-profit organizations (see, e.g., DiMaggio and Powell 1991). In contrast, the largely European centered 'societal effects' school has emphasized the influence of institutions with regard to the constitution of social groups and their competition for resources (Whitley 1999: 12). Clearly, there are different institutional approaches that deal with different objects and types of explanation. As a consequence, the range of studies that attempt to show how social institutions influence economic activities is considered too broad and too diffuse to characterize a single form of 'institutionalism' (Scott 1995: 34; Whitley 1999: 15).

**Table 2.3** Categories and carriers of institutions

CARRIERS	CATEGORIES		
	Regulative	Normative	Cognitive
<i>Cultures</i>	Rules and laws	Values and expectations	Categories and typifications
<i>Social structures</i>	Governance- and power systems	Regimes and authority systems	Structural isomorphism and identities
<i>Routines</i>	Protocols and standard procedures	Conformity and performance of duty	Performance programs and scripts

Adapted from Scott (1995: 52-55)

### 2.4.3 Social institutions

The evident heterogeneity of institutional approaches evokes the following question: Which institutional approach is dominant in the present study? The approach that underpins the analysis in this thesis is consonant with the recent literature on institutions and economic organization. This literature draws attention to the influence of a range of

<sup>22</sup> These schools include economic history, historical institutionalism in political science, neo-institutionalism in economics, traditional institutional sociology, neo-institutional sociology, population ecology, evolutionary theory in economics and ethno-methodology.



complementary institutions that constitute distinct types of economic organization (Lane 1995: 13; Hollingsworth and Boyer 1997: 4; Whitley 1999: 16). Dominant approaches in this field include, for instance, the National Business Systems; Social Systems of Production and Industrial Order approaches<sup>23</sup>. The dominant view underlying research in this area is that economic actors are embedded in complex social systems which place institutional constraints on the way forms of economic organization develop.

As is reflected by the research questions stated in Chapter 1, a distinction is made in this thesis between institutions on a societal level (such as the state, legal rules, and cultural conventions) and institutionalized organizational arrangements (i.e., forms of inter-firm cooperation) on an industry level. To facilitate analytical discrimination, institutions on the industry level will be referred to as 'forms of economic organization,' while institutions on the societal level will be labeled 'social institutions.' With regard to this distinction, the perspective adopted here differs from others that do not discriminate between forms of economic organization and social institutions. For instance, in the view of Hollingsworth and his associates (Lindberg, Campbell and Hollingsworth 1991: 3; Hollingsworth, Schmitter and Streeck 1994: 5-7), the state is an institutional form of governance mechanism, as are markets, hierarchies, networks, and associations.

Apart from the separation between social institutions and forms of economic organization, the perspective adopted here is characterized by a focus on dominant social institutions that channel and constrain the control and access of firms with regard to property rights and key resources such as raw materials, skills, capital, and legitimacy (Whitley 1992b; Lane 1995). This includes regulative, normative, and cognitive types of institutions (see Table 2.1). These dominant social institutions are seen to have remained primarily within the boundaries of nation states, which grew in significance as many countries industrialized in the 19th and 20th centuries. As a result, social institutions are often created as a 'by product' of the industrialization process, developed in association with the state (Whitley, forthcoming).

Finally, in line with many other institutional approaches, the basic assumption underlying the present research is that different arrangements of social institutions structure perceptions of managers in contrasting ways. So what seems to be rational for firms in one context may be quite the contrary in another institutional environment (Clegg 1990; Whitley, forthcoming). Hence, certain kinds of managerial action are

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<sup>23</sup> See Chapter 3 for more details about these approaches.

encouraged while others are discouraged, which leads to the development of convergent and fairly stable forms of governance within distinct national contexts.

In summary, social institutions are seen as nationally distinct patterns of action and complexes of both formally fixed rules and of informally generated cultural understandings which have acquired stability over time (Lane 1996; Whitley 1999). These patterns of action and complexes of rules assume a 'taken for granted' quality, preventing managers from perceiving organizational alternatives. As a result, institutions are largely self-sustaining and support the reproduction of stable organizational structures (cf. Zucker 1991; Sorge 1996). The influence of social institutions over forms of economic organization stems from the fact that they channel and constrain the actions of management, because they provide shared cognitions about what is legitimate and rational. Hence, social institutions influence the goals that are adopted by management and the manner in which they are pursued.

## 2.5 Summary

In this chapter the central concepts of 'inter-firm cooperation' and 'social institutions' have been explored, discussed, and defined. Inter-firm cooperation is considered as a (vertical and/or horizontal) relationship between two or more autonomous firms that is based on mutual obligations and objectives for a positive-sum game, involving recurrent transactions and some degree of joint control over activities and/or resources. Moreover, inter-firm cooperation is viewed as an important managerial issue because properly managed cooperative arrangements enable firms to enhance their innovativeness, responsiveness, and transactional efficiency, as well as strategic capabilities and positions.

On the basis of a review of 'real-types' of inter-firm cooperation, it has been indicated that cooperative forms of economic organization tend to combine characteristics of ideal-type networks, markets, and hierarchies. In addition, it has been highlighted that a wide range of distinct market-like, hierarchy-like, and network-like organizational arrangements can be found across different industries in different countries.

To date, research concerning forms of inter-firm cooperation has been highly fragmented due to the use of different theories, methods, and levels of analysis. Nevertheless, on the basis of the work of Ebers and Oliver (1998) it has been argued that

just two major paradigms, including a total of four distinct approaches, have been identified which both divide and unite the broad field of inter-organizational studies. These include the governance and social network paradigms, with the 'structuralist,' 'power and control,' 'institutional theory,' and 'institutional economics and strategy' approaches as variants. With regard to its focus, the present study can be located within the governance paradigm and more in particular within the institutional theory variant. An even more precise positioning has been achieved by addressing the perspective on social institutions in the current research.

In consonance with recent, mainly European-centered schools of thought among institutional theorists, social institutions are considered nationally distinct cognitive, normative, and regulative structures and activities that provide stability and meaning to social behavior. The nationally distinct societal environment comprised of these social institutions is regarded to channel and constrain the perceptions and actions of management and, in this way, affect the development of organizational structures.



## Chapter Three

### CONSTRUCTION OF THE ANALYTIC FRAMEWORK

*In this chapter the analytic framework is constructed. The framework is intended to offer a set of concepts that help to answer the following two questions. First, what are the key attributes of vertical and horizontal inter-firm cooperation? Second, which social institutions are likely to have an impact on the formation of cooperative inter-firm relations? To find an appropriate theoretical foundation for the framework, four major cross-national comparative approaches for the analysis of forms of economic organization are reviewed. On the basis of this review the 'business systems approach' is identified as the most appropriate conceptual basis for the analytic framework. The part of the business systems approach concerned with inter-firm relations is discussed in detail and also further developed by combining it with concepts from the literature on organizational networks. Finally, on the basis of the resulting analytic framework for this study, propositions are formulated about the influence of social institutions on the development of cooperative inter-firm relations.*

#### 3.1 Cross-national comparative research approaches

As was explained in the introductory chapter, a cross-national comparative analysis will be made of both cooperative inter-firm relations and a range of social institutions. This calls for the construction of an analytic framework that provides concepts and focus for the empirical analysis involved. The literature in the area of economic sociology offers several approaches that may provide a useful basis for the construction of such a framework.

Since the early 1980s a number of approaches have seen the light, which have gained the interest of a wide community of scholars from different countries. These are in



particular the 'societal,' 'business systems,' 'comparative capitalism,' and 'societal logic' approaches. In the next sections the key features of these approaches, including the issues focused upon, the conceptual frameworks offered and the methods used will be discussed and compared with each other in light of the aim of the current research. In this way, the most appropriate of the broad but distinct approaches can be determined as the basis for the construction of the analytic framework.

### 3.1.1 The societal approach

The societal approach is associated with the work of a group of French scholars known as the Aix-group (Maurice, Sellier and Silvestre 1984; 1986), which in a later instance engaged in collaborative research with German and British colleagues (Sorge and Warner, 1986). The approach is based on comparisons of closely matched pairs<sup>1</sup> of firms in different societies involving a relatively small set of in-depth cases. As such, contrasts and commonalties have been uncovered with respect to the work structures in German and French firms. These findings gave rise to the development of embryonic theories about the connection between a range of nationally distinct social institutions and the structure of work relations. In the societal approach a loose framework of three key dimensions guides the comparison of matched cases. The dimensions include the educational system, organizational relations, and the industrial domain. Furthermore, the cases involve two different approaches. First, synchronic descriptions of pre-selected industry characteristics are made in order to arrive at a general overview of the situation under investigation. Second, diachronic descriptions, involving a period of several years, are made to estimate the tightness of the relations found in the synchronic analysis.

Arndt Sorge (1991) developed the societal approach further in the direction of strategic management issues. As a result, the focus of the approach has shifted towards the link between societal effects and competitive advantage. In this amended version of the societal approach, retrospective comparisons are made of strategic developments in the fields of technology, organization, and human resources among same industries in different countries<sup>2</sup>. Similar to the analysis of the Aix-group, the cross-national

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<sup>1</sup> The cases of the Aix-group were controlled for size, product, production technology and dependency.

<sup>2</sup> The analysis of Sorge (1991) concerned the German, French and British firms in the CNC machine tools industry.

comparisons are guided by a set of central concepts<sup>3</sup> that help to relate institutional arrangements with business strategies and organizational forms. The amended societal approach differs from its predecessor with respect to the use of a larger number of cases instead of matching a limited number of them. The shift away from pair matching enabled the discovery of different product types, strategies, and levels of integration in same industries located in different countries.

### 3.1.2 The business systems approach

In the early nineties the business systems approach was introduced and developed further by the British scholar Richard Whitley and his associates (1990, 1991, 1992a, 1992b (ed.), 1992c, 1994, 1996, 1999). The central motive for the development of this approach was to find explanations for the existence (and persistence) of nationally distinct forms of economic organization in different capitalist societies. This issue was raised in the context of the emergence of the newly industrializing economies in East Asia and the ongoing economic integration of the European Union. The business systems approach has been used in studies showing that not only in Asian economies such as Taiwan, Hong Kong and South Korea, but also in European countries including Great Britain, Germany, Denmark and Finland, distinct forms of economic organization have emerged under the influence of nationally distinct social institutions.

The business systems approach offers a framework<sup>4</sup> for systematic cross-national comparisons of firms and markets in their nationally distinct institutional context. The key element in this framework is the firm, which is considered the basic unit of economic action in a society. It is important to note here that within the business systems approach, the concept of the firm refers to '*dominant units of strategic decision-making and coordinated planning*' (Whitley 1996: 42; cf. Whitley 1987) and not to financial-legal entities as is the case of narrow definitions of Anglo-Saxon origin. The reason is that firms can be different entities in different societies: the Chinese family business, the South-Korean 'chaebol,' the Japanese 'keiretsu,' and the US American 'divisionalized corporation' to name a few.

<sup>3</sup> Including competitive advantage, organizational boundaries, and human resources patterns (Sorge 1991: 165).

<sup>4</sup> The business systems concept constitutes a framework of concepts rather than a 'grand theory.' The framework is meant to provide a 'common language' to facilitate both communication and comparison of research findings about forms of economic organization.



The business systems approach offers a set of broad characteristics that help to conceptualize the organization of industry. These include 'the nature of the firm' (concerning characteristics of management and ownership), 'market organization' (concerning characteristics of inter-firm relations), and 'authoritative coordination and control systems' (concerning characteristics of authority relations). Apart from these characteristics a set of key social institutions has been identified. These are suggested to channel and constrain the way firms and their business-to-business relations are developed. The key social institutions include, among others, cultural conventions concerning individualistic and collectivistic behavior, state involvement in the industry, the nature of the financial system, and mechanisms to ensure trust<sup>5</sup>. In connection with each other, the organizational characteristics and key social institutions constitute the business systems framework that can be used for systematic cross-national comparative analysis of industries in their national context.

The business systems framework has been used by (mainly European) scholars for cross-national comparative research on forms of economic organization. Rather than regarding the business systems approach as a conceptual 'straightjacket,' it has been used as a basis for the development of new conceptual frameworks that suited the treatment of a variety of research issues about economic organization. For instance, Peer Hull Kristensen and his associates (1996: 113) formed an international team that used concepts of the business systems approach to compare Danish and Finnish business systems. The comparison was aimed to identify typical firms<sup>6</sup> in both countries. The results of this comparison were analyzed in terms of social institutions, ranging from the state via élites to financial memberships and unions. In a similar fashion, Christel Lane (1989, 1995, and 1996) has used the business systems approach as a source of concepts, rather than a set of guidelines in her research on the features of 'industrial orders' in

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<sup>5</sup> There is some variation in the range, emphasis and labeling of the key social institutions that are presented in the books and articles on this subject by Whitley (1990 -1999). This is considered inherent to the ongoing development that the business systems approach has witnessed over the past decade (compare, for instance, the frameworks in the 1992 book on pages 26 and 25, and the one in the 1999 book on page 79). The key social institutions used in the analytic framework of this study reflect this development in the business systems literature. Therefore, they are not literally labeled according one of the different frameworks presented by Whitley, but rather combine the different labels under a general denominator (see also Rademakers 1998; Rademakers and Van Valkengoed 1999).

<sup>6</sup> Typical firms are considered as 'real types' as opposed to Weberian 'ideal types.' Kristensen et al. (1996) refer here to the work of Spiethoff (1953: 459), who defined the real type as: '*Reflecting the sum of actually existing uniformities, everything that is essential in relations to a given phenomenon*' (see also Section 2.2.3).

different European societies. Her cross-national comparisons of economic transformations in the British, German, and French industries were guided by a framework combining different theories and approaches, in which neo-institutionalist perspectives dominate. On the basis of this framework, different structures and development trajectories of economic organization were identified and connected with nationally distinct social institutions including the state, the financial system, unions, and mechanisms to ensure trust in the business society of the countries involved.

### 3.1.3 The comparative capitalism approach<sup>7</sup>

In the first half of the 1990s, J. Roger Hollingsworth and his American and European associates developed a cross-national comparative approach concerning governance regimes across different industries both within and across different nation states. The roots of this approach can be traced back to a series of historical analyses of transforming governance regimes in a variety of industries in the USA (Campbell, Hollingsworth and Lindberg 1991). A comparative empirical assessment of the transformations of these industries yielded the view of governance structures (i.e., market-hierarchy arrangements) that had changed under the influence of power and control, culture, pressures for economic efficiency and technology development, and in particular state policies (Campbell and Lindberg 1991: 333). The upshot of this research served as a basis for the 'comparative capitalism' approach. An enhanced analytic framework was developed to accommodate cross-national comparative analyses of governance regimes on industry level (Hollingsworth, Schmitter and Streeck (eds.) 1994; Hollingsworth and Boyer (eds.) 1997). The industry/sector was taken as the key unit for comparative analysis, while governance regimes were defined as '*the totality of institutional arrangements that regulate transactions inside and across different economic systems.*' The conceptual framework guiding the analysis comprised a typology of governance structures, including markets, hierarchies, networks, associations, and state agencies (Campbell et al. 1991: 14, 31; Hollingsworth et al. 1994: 9-10, 273-278). On the basis of this framework, governance regimes in different industries were investigated in a variety of countries in the US, Japan, and Europe. The results of these case studies have gained the insight that '*Differences in governance within sectors are often recognizable as national differences in that they follow a similar logic across sectors*' (Hollingsworth and Streeck 1994: 272). The findings gave

<sup>7</sup> Also known as the 'social systems of production' approach (see Hollingsworth and Boyer 1999).



rise to a further development of the 'comparative capitalism' approach by adding societal effects to the framework in line with the work of Maurice et al. (see Section 3.1.1). The societal effects identified on the basis of the case studies consisted of three broad types of nationally distinct social institutions. These included 'identical rules of behavior' created and enforced on a national level (such as laws); 'identical factual conditions' on a national level (such as capital markets), vocational training systems and national craft trade unions; and 'identical cultural and political resources' that determine the extent of trust on which actors can draw. The role of the state in the industry is not considered as a nationally distinct social institution, but as an integral part of the governance regime of an industry/sector. Clearly, the 'comparative capitalism' approach does acknowledge the influence of social institutions on the development and transformation of forms of economic organization. However, in recent versions of the accompanying conceptual framework, the (possible) connections between particular institutions and particular forms of governance have remained largely unspecified.

#### **3.1.4 The societal logic approach**

The 'societal logic' approach originates from the USA and has been developed on the basis of studies of Asian enterprises by Marco Orrù, Gary Hamilton, and Nicole Woolsey-Biggart (1988; 1991; 1996; 1997). Their work is based on a loose framework for the analysis of enterprise structures and the organizing principles of the environment in which they are embedded. The focus of this approach is on historically developed authority relations among individuals and institutions in a society. Research in this fashion has led to the identification of distinct state-business relationships, principal corporate actors, and both intra-firm and market strategies in Japan, South-Korea, and Taiwan. In contrast to the other comparative approaches discussed above, explicit attention is given to the issue of isomorphism<sup>8</sup> (Orrù, et al. 1991: 364). The 'societal logic' approach is characterized by both rich and detailed, and also 'grounded' rather than systematic descriptions of organizational patterns concerning ownership, intra-group networks, inter-group networks, subcontract relations, investment patterns, and growth patterns. Regarding the focus of this approach, an important data source is the available documentation concerned with the historical formation and the organizational

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<sup>8</sup> Isomorphism refers to the results of homogenization processes of formal organizations within a particular environment. DiMaggio and Powell (1983) have identified three major forms of institutional isomorphism: Coercive - based on political influence and legitimacy issues; mimetic - based on standard responses to uncertainty; and normative - associated with professionalization processes.

patterns of the enterprise groups under investigation. Finally, in this approach the number of enterprise groups is considered an important explaining variable in itself. Hence, no predetermined sets of firms (e.g. top-five) are analyzed, but rather the naturally occurring patterns within the economy.

### **3.1.5 Comparing the comparative approaches**

As shown by Table 3.1, the four major comparative approaches differ from each other in some important respects. Marked differences concern the focus (transformation processes vs. structural properties of economic organization), the nature of the framework used (loose vs. more structured), and the methods used (matched pairs of firms vs. naturally occurring patterns; framework-guided vs. 'grounded'). Both within and between the different approaches, the level of analysis of the forms of economic organization varies between enterprise, industry and country level. In addition, all approaches discussed here pay attention to the nature and historical roots of social institutions from a national perspective.

Regarding their features, which of the major approaches can be considered most suitable as a basis for the analytic framework of this research? With regard to the research aim, the major criterion is the appropriateness for detailed, systematic, and rigorous cross-national comparisons of patterns of inter-firm cooperation in their institutional environment. The 'societal' approach offered by Sorge, Maurice, and their associates offers a loose analytic framework is focused on human resources and other intra-firm characteristics, rather than on aspects of inter-firm organization. Obviously, this focus is not in accordance with the requests for the current research. The 'societal logic' approach of Hamilton, Biggart, and Orrù is considered little suitable as a basis for the analytic framework as well. Although attention is paid to different forms of inter-firm organization, the approach is 'grounded' in nature and does not offer a systematic framework of concepts for cross-national analysis.

At a first glance, the 'comparative capitalism' approach seems well suited as a basis for the analytic framework for the present study. The approach is focused on different forms of inter-organizational arrangements across similar industries in different countries. The findings are linked with the influence of social institutions (in particular the state) on a national level. In this sense, the 'comparative capitalism' approach reflects remarkable similarities with the 'business systems' approach, certainly with regard to the types of social institutions that are taken into account. However, the 'comparative capitalism' ap-



**Table 3.1** Cross-national comparative research approaches compared (source: see text)

<b>Approach</b>	<b>Key Authors</b>	<b>Major focus</b>	<b>Framework and key methods</b>	<b>Key institutional influences</b>
<i>Societal</i>	Maurice et al. (1986); Sorge and Warner (1986)	Comparison of work structures within firms in different countries	Loose framework, use of matched (in-depth) cases, and both diachronic and synchronic analysis	System of industrial relations, system of vocational education
	Sorge (1991, 1997)	Comparison of the societal advantages of technologies, organization & human resources of firms in national industries	Loose framework of key concepts. Guidance by propositions/hypotheses. Both diachronic and synchronic analysis	System of industrial relations, system of vocational education
<i>Business systems</i>	Whitley (1990-1999)	Comparison of nationally distinct patterns of both inter- and intra-firm organization	Business systems framework (key characteristics of economic organization and key social institutions). Historical analysis of social institutions, synchronic analysis of inter- and intra-firm characteristics	Social institutions including state involvement in the industry, the financial system, mechanisms to ensure trust, individualism vs. collectivism
	Kristensen et al. (1996)	Comparison of nationally distinct types of economic organization	Business system framework, real-type concept. Historical analysis of social institutions, synchronic analysis of inter- & intra-firm characteristics	Social institutions including the state, élites, financial membership, and unions
	Lane (1989-1996)	Comparison of structures and transformation processes in national industries	Loose multi-theory framework in line with the business systems approach. Historical analysis of social institutions, diachronic analysis of industrial orders	The state, the financial system, unions, and mechanisms to ensure trust
<i>Comparative Capitalism</i>	Campbell, Hollingsworth and Lindberg (1991); Hollingsworth Schmitter and Streeck (1994)	Comparison of governance regimes in US, Japanese, and European industries	Broad conceptual framework of governance structures and institutions. Historical analysis of transformation processes across different industries; cross-national comparison of governance structures on industry level	State policy, capital markets, laws on property rights, vocational education systems, unions, and cultural / political resources
<i>Societal logic</i>	Orrù, Hamilton, and Biggart (1988-1997)	Comparison of nationally distinct forms of enterprise organization in East Asia	Loose framework, 'grounded' approach of data collection and analysis. Historical analysis of the development of enterprises, their inter-firm relationships and social institutions	State agencies, financial systems, cultural conventions

proach pays not much systematic attention to the influence and nature of social institutions. By contrast, the business systems approach offers a framework that, among other things, systematically links characteristics of inter-firm organization with a set of key social institutions. In addition, due to its systematic nature, the business systems approach offers a 'common language' that facilitates communication between students of forms of economic organization in different national contexts. Regarding these merits, the business systems approach is considered the appropriate basis for the construction of the analytic framework of this study.

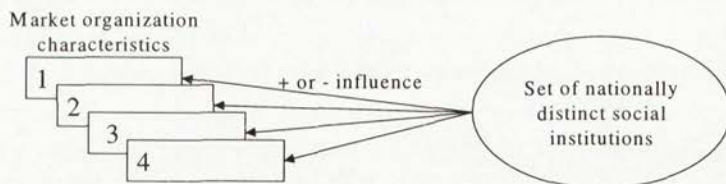
### 3.2 The market organization framework

The market organization framework is the part (or sub-system) of the business systems approach concerned with aspects of inter-firm organization. It forms the basis on which the analytic framework for this study is built. For this purpose, the market organization framework will be addressed in greater detail. A number of its shortcomings will be discussed with regard to observations in the literature and the requests that come with the aim of this research. The shortcomings identified will be either moderated or eliminated, resulting in an adapted framework that will be used to guide and structure the present study.

#### 3.2.1 Market organization characteristics

The market organization framework is comprised of four characteristics: 1) the extent of long-term cooperative relations between firms within and between sectors; 2) the significance of intermediaries in the coordination of market transactions; 3) the stability, integration, and scope of business groups; and 4) the dependence of cooperative relations on personal ties and trust (Whitley 1992b: 9). Together, these characteristics help to identify inter-firm relation patterns on either the industry or national level.

**Figure 3.1** The essence of the market organization framework



Source: see text



These patterns can be explained at least in part by linking each of the four market organization characteristics with the nature of social institutions. Figure 3.1 presents the essence of this part of the broader business systems approach.

### 3.2.2 Critique and refinements

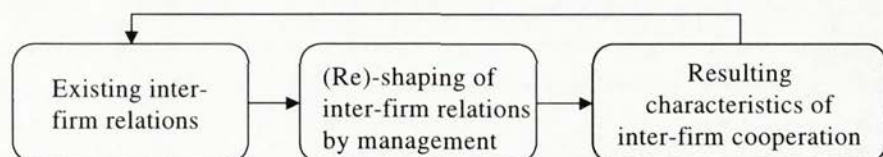
Observations in the literature point out a number of shortcomings of the business systems approach, which, consequently, are relevant to the market organization framework as well. Remarks have been made about the vulnerability of the business systems approach to accusations of determinism (Lane 1995: 13; Wilkinson 1996: 433). For instance, by linking market organization characteristics to the nature of key social institutions, there is a risk of overlooking the possibility that organizations may be powerful enough to choose and support deviant behavior over a long period of time (Mayer and Whittington 1996: 93). Moreover, not all firms may be equally capable to adapt to or take advantage of the constitutive forces of social institutions (Kristensen et al. 1996: 116). As a consequence, great caution is required if explanations are generated for empirical findings that result from the application of the market organization framework.

A common critique of the business systems approach concerns its basically static nature (Loveridge 1998: 1050). In line with this, the market organization framework essentially facilitates the identification of organizational structures and practices at a particular point in time. However, in a less static fashion, the framework can be used for diachronic analysis as well to gain insights into the relative stability of forms of inter-firm organization. Another shortcoming concerning the static nature of the market organization framework is that it largely disregards change. Hence, it is proposed here to make explicit the process dimension that, in fact, implicitly underlies the framework. In this way, attention is paid to structural developments in the past to arrive at explanations about present patterns of inter-firm organization. Moreover, the role of management in these restructuring processes becomes more visible. The adjustment suggested here is displayed in Figure 3.2. As can be seen, the formation of cooperative inter-firm relations is viewed as an ongoing process. Triggered by either operational or strategic motivations (see Chapter 1), *existing inter-firm relations are developed further by management*. This, in turn, results in new or adjusted patterns of inter-firm cooperation.

A final observation concerns the appropriate level of analysis in business systems research. A debate on this issue resulted in the view that forms of economic organization may be analyzed either on industry or national level (Whitley 1992b: 269).

However, the nation state is considered the appropriate level of analysis for social institutions in most cases (*ibid.*). This certainly makes sense for institutions such as legal systems, which usually have been established by national governments and therefore have a national scope.

**Figure 3.2** The market organization framework with a process dimension



Source: see text

However, within a country, key social institutions can be industry-specific in nature as well. For instance, the different forms and nature of state involvement in the agri-food industries of most capitalist societies imply the existence of social institutions that are both industry and nationally specific in nature (*cf.* Tracy 1989). Therefore, in case of cross-national comparative analysis of industries in their national contexts, it is considered useful to analyze the nature of (national) social institutions from an industry perspective.

Apart from the observations found in the literature, the market organization framework has some shortcomings with respect to the requests that emanate from the aim of this study. First, the attention paid to the characteristics of business groups reflects the 'genesis' of the framework, i.e., studies of East Asian economies (Whitley 1992b: 6). In these studies large inter-industrial clusters of either autonomous or integrated firms have been identified as important forms of economic organization in, for instance, South-Korea (the 'chaebol') and Japan (the 'keiretsu' and 'kigyo shudan'). However, devoting attention to the characteristics of inter-industry business groups is considered not very relevant to the current study, given its focus on inter-firm cooperation within European industries. Moreover, a detailed analysis of forms of both horizontal and vertical inter-firm relations is likely to lead to the identification of possible clusters of firms.

Second, the characteristic concerning 'the relative importance of intermediaries in transaction coordination' is quite broadly defined and needs adjustment as well as



further articulation. Intermediaries are, for instance, Japanese trading firms that coordinate the inputs and outputs of a huge number of firms in a range of different markets. Trading firms of this kind are quite characteristic of East Asian economies, which make it less relevant to pay explicit attention to such phenomena in an analytic framework for studying inter-firm relations within European industries. In the market organization framework trade/industry associations<sup>9</sup> (i.e., business associations) are also mentioned as possible intermediaries (Whitley 1992b: 12; cf. Lane 1996) but not much elaborated upon. It is argued here that business associations can be looked at as forms of (multi-)horizontal inter-firm cooperation (Bowman 1989: 47, 261; Whitley, Henderson, Czaban and Lengyel 1996: 411; Schmitz 1997: 9) rather than organizations which are intended to coordinate transactions between autonomous firms. The consequence of this perspective is that further articulation is required of the attributes that indicate the relative importance of business associations as forms of inter-firm cooperation (see Section 3.3). The market organization framework also takes into account banks as possible intermediaries. However, banks are an integral part of the financial system as well, and are regarded as a key social institution. Consequently, the way banks and firms interact is seen as a reflection of the nature of the financial system rather than an attribute of inter-firm cooperation within an industry.

Finally, the characteristics of the market organization framework are broadly defined. Although these characteristics proved their usefulness in broad analysis on a national level, they provide insufficient focus for detailed analysis of inter-firm relations on an industry level. For instance, it is not entirely clear what the distinct attributes are of the 'long-term cooperative relations' mentioned as one of the characteristics. Therefore, to enhance the intended rigor of this research, further refinement is needed in order to distinguish different forms and degrees of cooperation between individual firms.

In sum, the market organization framework has been adjusted here in some respects. First, the process that underlies the development of inter-firm relations has been made explicit. Second, an industrial perspective has been taken for the analysis of the nature of key social institutions. Third, the 'Asian' market organization characteristic concerning the role of business groups was removed from the framework. The scope of the characteristics pertaining to the relevance of intermediary organizations has been

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<sup>9</sup> As a matter of definition, trade associations link together competing firms, while industry associations link firms across the supply chain of an industry.

limited to trade associations as forms of horizontal inter-firm cooperation. Finally, more detailed specifications of key attributes of both vertical and horizontal cooperative inter-firm relations has been called for.

### 3.3 Attributes of inter-firm cooperation

In the former section various types of inter-firm cooperation have been discussed. A distinction has been made between vertical and horizontal inter-firm relations. Moreover, in a more implicit fashion, a distinction has been made between bilateral (between two firms) and multilateral (business groups and trade associations) types of inter-firm cooperation. These dimensions can be combined with each other in a 2x2 matrix (see Matrix 3.1) to arrive at four major categories of forms of inter-firm cooperation (cf. Schmitz 1997: 8). In this matrix, the categories of multilateral forms of inter-firm cooperation are further distinguished as direct relations and arrangements via business associations.

**Matrix 3.1** Forms of inter-firm cooperation

	Bilateral	Multilateral
Vertical	<b>1</b> <i>IDS</i> Buyer-supplier arrangements	<b>2</b> <i>TRA</i> Cross-supply chain arrangements, including industry associations
Horizontal	<b>3</b> <i>MCU</i> Dyadic competitor arrangements	<b>4</b> Multi-competitor arrangements, including trade associations

Source: see text

Given this categorization invokes the question: what are the key attributes of these different forms of inter-firm cooperation? This question will be answered in a three-step approach. First, key attributes of vertical cooperation between two or more individual firms (box 1 and part of box 2 in the matrix) will be defined. Similarly, attributes of direct horizontal cooperation (box 3 and part of box 4) will be discussed. Finally, attributes that indicate the relative importance of trade/industry associations as forms of multilateral inter-firm cooperation (part of box 2 and 4) will be addressed.



### 3.3.1 Vertical inter-firm cooperation

The market organization characteristics of vertical inter-firm relations, i.e., 'the extent of long-term cooperative relations between firms' and 'the dependence of cooperative relations on personal ties and trust,' can be transformed into a more systematic distinction between ideal-typical spot-market and cooperative relations (cf. Sako 1992). These ideal types are seen here as the extremes of a continuum ranging from 'no cooperation' to 'full cooperation.' In addition, the ideal types can be unraveled into key attributes according to a categorization offered by Ebers and Grandori (1997: 270), which includes three major 'flows.' These include flows of 'information,' 'mutual expectations,' and 'resources and activity links'<sup>10</sup>. Albeit they not have been worked out as detailed as considered required for the present study, these three kinds of 'lower level ties' are considered very useful because they help to identify -on a micro-level- what goes on between firms (Ebers and Grandori 1997: 269). Therefore, in the remainder of this section, the three kinds of 'lower level ties' will be integrated into the analytic framework and also further refined. In this way, key attributes of the content of inter-firm relations will be identified.

*Flows of information* concern the degree and nature of both knowledge and information exchange between firms, which guides the decisions and actions of management with respect to the form and content of the inter-firm relationships. In ideal-typical cooperative relations the exchange of information exceeds prices, qualities, and quantities. In addition, knowledge is shared to enable mutual learning. On the contrary, in spot-market relations standardized commodities are exchanged between anonymous parties (Whitley 1992a: 73). This implies that there is no exchange of knowledge between the parties involved, while information exchange is limited to the necessary transactional data.

*Flows of mutual expectations* refer to the basis of exchange relations that influence actor's perceptions of the opportunities and risks of cooperation. A distinction can be made between the dichotomous types of explicit and implicit contracts, i.e., relations

<sup>10</sup> These three kinds of flows (or: 'lower level ties') among firms have been identified by Ebers (1997: 23-33) and elaborated upon from a different perspective by Ebers and Grandori in the concluding review of articles in a book edited by Ebers (1997) on the formation of inter-organizational networks. In the introductory part of the book the 'flows' and also other concepts including 'distribution of property rights over resources' and 'main co-ordination mechanisms' are used as a framework to position different papers by different authors (pp. 23-33). In the concluding part the attention is turned to 'what goes on between organizations.' At this point, the three kinds of ties (or 'flows') are presented as key elements of inter-organizational networks (Ebers and Grandori 1997: 270-271).

based on formal contracts versus relations based on (informal) trust and mutual obligations (Smitka 1991; Sako 1992; Lane and Bachmann 1996). In practice, exchange relations are likely to involve some level of trust, as well as the use of written contracts. Moreover, transactions between firms can be based on written contracts with various degrees of specificity and standardization. The reliance on contracts with a high degree of specificity and standardization is considered here as an attribute of spot-market relations. With respect to the other side of the continuum, oral agreements imply the reliance on trust instead of written documents, which is an attribute of ideal-typical cooperative relations.

*Flows of resources and activity links* refer to the degree of interdependence of the parties that are engaged in an exchange relation. The time horizons involved in such relations are considered an important indicator. Put in dichotomous terms, time horizons can range from long-term (multiple years) to short-term (restricted to a single transaction) horizons (Whitley et al. 1996: 410). Long-term horizons are an attribute of cooperative relations, while ideal-typical spot-market relations are focused on current options and outcomes. The frequency of transactions is not considered a distinguishing attribute, because a series of repeated transactions between firms does not necessarily involve a long-term horizon and a single transaction does not exclude cooperation (Rademakers 1998: 1022). Another aspect of interdependence in inter-firm relations is the degree of risk sharing between the parties involved (Dore 1983: 465). In spot-market relations risk sharing is absent, as the selection of a supplier or customer is limited to price-quality deliberations. In contrast, ideal-typical cooperative relations include risk sharing and may occur in such arrangements as joint research and development, joint production, cross-shareholdings, or joint investments (Orrù, Hamilton and Suzuki 1989). Table 3.2 provides an overview of the key attributes of ideal-typical spot-market relations and cooperative relations that have been discussed here.

Finally, additional indicators for either cooperative or spot-market relations are the degree of self-sufficiency through vertical integration on the one hand, and a focus on narrow specialist activities on the other (Whitley 1990: 68). Firms may choose to internalize their risks instead of exposing themselves to market relations. This is reflected by a high degree of self-sufficiency, which indicates that authoritative control by vertical integration is preferred to (external)<sup>11</sup> flexibility and cooperative inter-firm relations. On the contrary, a

<sup>11</sup> External flexibility refers to the possibility of sharing or transferring risks with/to exchange partners.



focus on narrowly specialized activities may reflect a preference for spot-market relations that offer high flexibility but no authoritative control. However, a high level of firm specialization may also indicate that a higher priority is adhered to cooperative inter-firm relations. Such relations offer relatively less external flexibility than spot-market relations (De Man 1996) but provide the possibility of shared risks and control based on common goals (Smitka 1991).

**Table 3.2:** Key attributes of cooperative and spot-market relations

<b>Cooperative relations</b> <i>Regularly Spm Relations</i>	
1. Flows of information:	<ul style="list-style-type: none"> <li>• Surpassing transactional information</li> <li>• Exchange of knowledge</li> </ul>
2. Flows of mutual expectations:	<ul style="list-style-type: none"> <li>• Relations largely based on mutual trust</li> </ul>
3. Flows of resources and activity links: <i>Rules</i>	<ul style="list-style-type: none"> <li>• Long-term time horizon</li> <li>• Risk sharing</li> </ul>
<b>Spot-market relations</b> <i>Have to be regulated by cooperative relations</i>	
1. Flows of information: <i>is not</i>	<ul style="list-style-type: none"> <li>• Limited to price, quantity, and quality</li> <li>• No exchange of knowledge</li> </ul>
2. Flows of mutual expectations: <i>market</i>	<ul style="list-style-type: none"> <li>• Relation based on formal contracts</li> </ul>
3. Flows of resources and activity links: <i>rules</i>	<ul style="list-style-type: none"> <li>• Short-term time horizon</li> <li>• No risk sharing</li> </ul>

Source: see text

### 3.3.2 Horizontal inter-firm cooperation

There is a wide range of possible forms and degrees of (direct) cooperative relations between two or more competitors. For instance, horizontal cooperation may involve strategic partnerships to reshape the industry, to enter new markets or to learn from each other. Horizontal cooperation may also remain limited to loose relations between firms meant to keep each other informed. This wide variety of possible forms is difficult to capture in a limited set of attributes. Nevertheless, the three kinds of 'flows' that have been applied in the former section are adequate for the identification and description of forms of horizontal cooperation.



*Flows of information*, i.e., knowledge and information exchange in horizontal relations between autonomous firms can happen on either an ad-hoc or a more structural basis, while the intensity may vary as well. Information exchange between competitors may be highly non-obligatory and limited to non-commercial aspects of the industry, including for instance the exchange of views on general developments, governmental policies or the reputation of the industry in society.<sup>12</sup> The same is true for the exchange of knowledge without competitive value. More intensive forms of knowledge and information are likely to occur in structured cooperative relations such as joint ventures, interlocking directorates (Wong 1996: 91), and 'learning relationships' or 'skill-substitution arrangements' (Child and Faulkner 1998: 102).

With respect to *flows of mutual expectations*, horizontal cooperative relations can be based on various combinations of implicit agreements (trust) and explicit (formal) contracts. In other words, similar to vertical relations, the basis of horizontal relations can range from informal (high trust) to formal agreements (specified contracts). In this respect Child and Faulkner (1998: 56) have identified indicators for different degrees of trust in horizontal relations, which range from calculation (low trust, competitors are just prepared to work with each other) via mutual understanding (moderate levels of trust, the parties get to know each other) to bonding (parties concerned with one another's interests).

Finally, the *flows of resources and activity links* in horizontal cooperative relations reflect the degree of interdependence between the firms involved (cf. Orrù et al. 1989). A key element here is the degree of risk sharing between the partners, which can differ considerably. Risk sharing is low in arrangements where firms make use of (e.g., hires) the equipment of competitors, or where firms share transport capacity for efficiency reasons. Higher levels of risk sharing are present in mutual share holdings, which involves flows of financial resources that link (part of) the destiny of firms to each other. Finally, competing firms may engage in joint investments ranging from joint ventures to joint research and development, wherein all risks are shared among the participants. Table 3.3 provides a summary of the key attributes of horizontal cooperative relations.

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<sup>12</sup> Note that this kind of information exchange is more likely to occur via trade/industry associations, which will be addressed in the next section.

**Table 3.3** Key attributes of horizontal cooperative relations

<b>Flows between competing firms</b>	
1. Flows of information:	<ul style="list-style-type: none"> <li>• Information exchange</li> <li>• Knowledge sharing</li> </ul>
2. Flows of mutual expectations:	<ul style="list-style-type: none"> <li>• Implicit agreements</li> <li>• Explicit contracts</li> </ul>
3. Flows of resources and activity links:	<ul style="list-style-type: none"> <li>• Joint investments</li> <li>• Mutual shareholdings</li> <li>• Equipment sharing</li> </ul>

Source: see text

### 3.3.3 Business associations<sup>13</sup>

As indicated in Matrix 3.1 (see Section 3.3), two different types of business associations are distinguished. The first type is the trade association, which has a voluntary membership base of competing firms. Industry associations are the second type and link together firms across various stages in the supply chain of a particular industry. Both types of business associations may have either voluntary or compulsory membership.

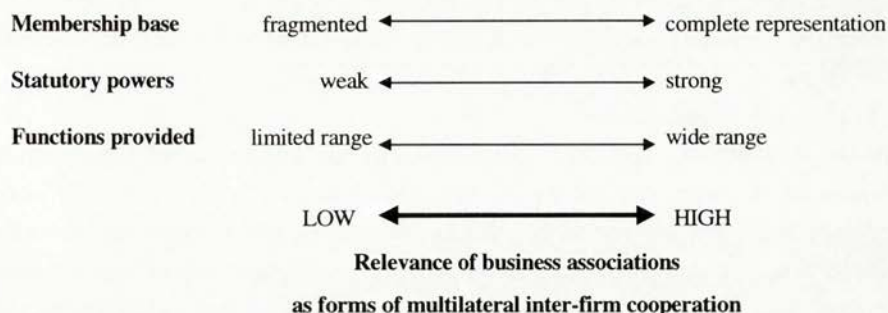
The relative importance of business associations as forms of multilateral cooperation is captured by three key characteristics, including their membership base, their statutory powers, and the functions they perform for their members (cf. Lane 1996; Best 1990). The membership base of business associations can range from complete industry representation to fragmented membership. In addition, business associations may be able to function as quasi-governmental agencies with statutory powers to influence or direct the behavior of their members. Moreover, business associations can vary with respect to the range of functions offered. In Figure 3.3 these characteristics are placed on a continuum that helps to indicate the relative importance of business associations as forms of multilateral inter-firm cooperation within an industry.

Contrary to the 'membership base' characteristic, which is quite straightforward in nature, the 'statutory powers' and the 'range of functions provided' characteristics need some closer attention. Based on past research, Hollingsworth, Schmitter and Streeck (1994: 7)

<sup>13</sup> This section has been presented to sub-theme 3 'Business Systems in their International Context' of the 15<sup>th</sup> EGOS Colloquium, University of Warwick, 4-6 July 1999.

enumerated a broad range of possible roles and functions of business associations, including both aspects of statutory powers and ways of bundling strengths.<sup>14</sup>

**Figure 3.3** The relative importance of business associations



Source: see text

Firstly, with regard to statutory powers, business associations may have the power to formulate rules for their members that range from far-reaching to more limited strategic implications. In case of strong statutory powers, business associations act as semi-governmental agencies that decide on the prices, production goals, and investment strategies of their members. However, if statutory powers are weak, the rule-setting abilities of associations may be limited to the promotion of standardization (quality, protocols) and the formulation of general codes of conduct that are based on voluntary compliance. Secondly, possible ways to bundle strengths/resources of multiple firms are reflected in a range of functions that can be provided by business associations, including the dissemination of information, technology transfer, channeling communication, influencing state agencies, initiating and coordinating joint research and development, and organizing vocational training.

The diversity of roles and functions listed by Hollingsworth and his associates are likely to have either intended or unintended effects that can be subsumed to three broad

<sup>14</sup> The full list includes information services, organizing joint research and development, promoting standardization, transferring technology, organizing vocational training, channeling communication, influencing state agencies, formulating codes of conduct, negotiating with labor, and also deciding on prices, production goals, and investment strategies.



categories<sup>15</sup>. These include the reduction of risks (by sharing them via business associations), the reduction and sharing of uncertainties (by knowledge and information sharing and common rules), and the increase of industry cohesion (through forms of socialization via business associations) (cf. Lane 1996: 282). In the remainder of this section, these categories will be used to structure a further discussion of the roles and functions of business associations on the basis of the diverse body of relevant literature.

### *The reduction of uncertainties*

Bowman (1989: 46) considers business associations as vehicles of systematic and formalized inter-firm communication. This communication involves the dissemination of knowledge<sup>16</sup> and information by business associations, which can be carried out in a variety of ways and in different degrees of intensity. Associations may act as informational brokers (Lütz 1997: 234; McEvily and Zaheer 1997b) or, in Burt's (1992) terms: as a 'bridging tie' in a network of firms. In addition, business associations can generate and channel information on market developments, and bring firms together to hear about advances in management and technology (Smitka 1991: 78). Moreover, they can function as the 'collective memory' or the 'pool of common knowledge' for their members. Examples are the publication of annual reports about the industry and the development of industry-specific databases.

Business associations can play an important role in self-administration by groups of firms which reduces uncertainties for firms with respect to the government and the legal system. Self-administration involves the development and monitoring of common rules, routines or procedures, and may be based on statutory powers of the association (Van Waarden 1992: 523; Lane 1996). Less constraining forms of self-administration are based on voluntary approval of the association members. Examples include the development of general agreements of trade as standards for inter-firm exchange of goods, the formulation of agreements against the application of environmentally harmful production methods or materials, the setting of quality standards, and the formulation of general codes of conduct. A distinct form of self-administration by business associations is the provision of arbitration services to solve conflicts between members (Van Waarden 1992: 523).

<sup>15</sup> The three categories may not be entirely mutually exclusive. However, they are considered helpful to achieve an adequate level of distinction between the range of different (possible) functions of business associations.

<sup>16</sup> The dissemination of knowledge is seen to include the function of technology transfer, which was mentioned before.

According to Nooteboom (1999: 4), the availability of a third party with sector-specific expertise that can be called for arbitration reduces the need of firms to use detailed exchange agreements. In addition, the idea of being judged by experts from within the industry instead of 'laymen' from courts generates confidence that the parties in conflict are treated fairly (i.e., in line with the mores of the industry).

### *The reduction and sharing of risks*

Firms can reduce and/or share their business risks by pooling resources, knowledge, and operations (Child and Faulkner 1998). These joint actions can be facilitated, initiated, and/or coordinated by business associations. This is particularly true for activities that are considered not commercially sensitive, such as research aimed to solve shared problems, vocational training and generic promotion. These kinds of joint action are considered particularly relevant to industries that include many small firms. For example, the Brazilian shoe manufacture industry benefited greatly from trade fairs organized by trade associations, which proved to be critical to firms to conquer export markets (Schmitz 1997: 8-10). Interestingly, as a result of their marketing success, firms grew larger and the need for joint marketing efforts decreased. However, at the same time the need for joint action shifted towards quality improvement, which resulted in more vertical cooperation via both direct firm-to-firm relations and business associations.

Another aspect of the reduction of risks via business associations is the relative ease of firms to act in a concerted way in case of crises that harm the competitive basis of the entire industry. With regard to the empirical setting of this study, it can be noted that the agri-food industry is particularly sensitive to such crisis. Examples of crises that occurred in the second half of the 1990s are the concerns about genetically modified organisms in the EU, the outbreak of swine fever in the Netherlands, BSE in Britain, chicken viruses in Hong Kong, and dioxin-poisoned chicken in Belgium. Obviously, these food-related crises had very negative consequences for the firms involved and the consumers' trust in the agri-food industry as a whole. The initiation and coordination of joint action in case of such crises can -at least- be facilitated by business associations. In this respect, business associations may function as a center in firm-government networks for the coordination of coherent policies to solve industry-wide crisis and also as a provider of industry-specific issue management (Van den Bosch and Van Riel 1998).



*Reinforcement of industry cohesion*

Functions of business associations that reinforce industry cohesion, in fact, reduce both uncertainties and risks of the firms involved. This is certainly true for the joint promotion of interests with respect to the government. The development of governmental policies that affect the industry on either a regional, national, pan-European, or global level are sources of risks and uncertainties. An example is the policy making process that preceded the ban on CFKs in refrigerators and aerosols. This process took multiple years and implied great uncertainties and risks for the investment policies for the firms involved; such a ban would lead to severe shifts in markets, key technologies, and the need for raw materials (Harrison 1997). Business associations promoting their members interests to governments can be seen as lobby organizations (Greenwood et al. 1992). To be able to perform such a function, business associations require a 'critical mass' of loyal members, resources, and information, which form the basis for their influence on governmental circles (Van Waarden 1992: 522). Apart from lobbying, business associations may also promote their member's interests by participating in policy formulation. In such a function, business associations can be seen as providers of industry-specific knowledge for the development of sustainable governmental policies (Lane 1992: 73).

Business associations can also play a role in strengthening industry cohesion by providing a 'platform' where managers of competing firms meet each other on a regular basis (i.e., horizontal cohesion). If managed poorly, these meetings may result in clique formation, inertia, collusion, and decreased competitive strength (Best 1990)<sup>17</sup>. If managed properly, however, regular meetings are likely to enhance the efficiency and competitive strength of the industry. Examples are the development of a joint strategic approach vis-à-vis external competitors, or initiatives to raise efficiency, skills, and quality (Schmitz 1997: 10). In such cases, business associations facilitate processes of socialization (Casson and Cox 1997: 180), the building of trust, reputations, and commitment (Smitka 1991: 151; Bachmann 1998: 15), goal alignment (Porter 1996)<sup>18</sup>, and cooperative learning (McEvily and Zaheer 1997a). In a similar fashion, business associations can function as a meeting point for managers of firms that operate in different stages of the supply chain (i.e., vertical cohesion). The results of the above discussion are summarized in Table 3.4.

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<sup>17</sup> See also Chapter 2.

<sup>18</sup> Or, in Porter's (1996) terms: building joint industry foresight, a joint way of perceiving the future of the industry.



**Table 3.4** Categories and functions of business associations

Categories	Functions
<i>Reduction of uncertainties</i>	<ul style="list-style-type: none"> <li>• Dissemination of information and/or knowledge</li> <li>• Development and monitoring of common rules, routines or procedures</li> <li>• Arbitration in case of conflicts</li> </ul>
<i>Reduction and sharing of risks</i>	<ul style="list-style-type: none"> <li>• Initiation of joint activities</li> <li>• Initiation and coordination of actions in case of industry-wide crises</li> </ul>
<i>Reinforcement of industry cohesion</i>	<ul style="list-style-type: none"> <li>• Promotion of interests (lobbying/participation)</li> <li>• Platform for managers of competing firms (horizontal cohesion)</li> <li>• Platform for managers of firms operating in different stages of the supply chain (vertical cohesion)</li> </ul>

Source: see text

### 3.4 The nature and influence of key social institutions

In tune with the business systems approach adopted here, the development of cooperative inter-firm relations is seen as being channeled and constrained in large measure by national social institutions. This observation raises two questions. First, which key social institutions are likely to influence the formation of cooperative inter-firm relations? Second, what is the suggested influence of these social institutions according to the literature? These questions will be addressed on the basis of a review of the relevant business systems literature that has been published between 1990 and 1999.

#### 3.4.1 Background and proximate social institutions

Within the business systems approach two broad types of key social institutions are distinguished: 'background' and 'proximate' social institutions (Whitley 1992b: 19). First, background social institutions reflect the cultural and historical background of societies. This involves, among others, cultural conventions about authority, individualistic

behavior, and mechanisms to generate trust. Second, proximate social institutions have emerged during, or along with, the industrialization of countries. Prominent examples in this respect are the state and the financial system. Contrary to their 'background' counterparts, these social institutions are directly involved in economic activities as they partially or fully control the availability and access to resources, property rights, and political control (Whitley 1992b: 269).

Evidence from empirical research underpin the observation that cohesive arrangements of these background and proximate social institutions are likely to constitute relatively stable and dominant patterns of inter-firm cooperation on either national or industry level (Nishida and Redding 1992; Whitley 1990; 1994; Lane 1996; Lane and Bachmann 1996; Rademakers 1998). However, in tune with this observation, different patterns of inter-firm organization may co-develop within national contexts characterized by a great variety of non-cohesive social institutions (Whitley 1992b: 177; Lane 1996: 297). This implies that variations in patterns of economic organization may exist both within and across countries. On the basis of a review of the business systems literature, Rademakers and Van Valkengoed (1999) have identified the key social institutions that are considered to influence the development of inter-firm relations. Relevant proximate social institutions in this respect are the legal system, the state, and the financial system. The relevant background social institutions include (informal) mechanisms to ensure trust and conventions about the legitimacy of individualistic vs. collectivistic behavior. Below, the suggested influence of these social institutions on the development of inter-firm relations is discussed in more detail.

### 3.4.2 Mechanisms to generate trust<sup>19</sup>

Social institutions that generate and guarantee trust between exchange partners in a society can vary in strength and can include both cultural conventions and legal systems. The nature and strength of these social institutions are considered crucial factors in the development of cooperative relations between firms (Lane and Bachmann 1996). The connection between mechanisms to generate trust and the development of cooperative inter-firm relations can be discussed further on the basis of three different types of trust, including process-based, characteristic-based, and institutionally-based trust (Zucker 1986:

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<sup>19</sup> This paragraph has been presented at the IAMA Food and Agribusiness Conference "Building Trust in the Agro-Food System: Trade, Technology and Competitiveness", Florence, Italy, July 13-16 1999.

60). Different bases of trust may co-exist in a society, but one is likely to dominate the others.

First, process-based trust is based on experiences that are built between exchange parties over time. People learn to know each other and built reputations, which leads to expectations that the behavior of the business partner will be more or less the same as in the past. This type of trust particularly develops in societies where a reliable law system or any other formal basis for trust is largely absent, as is the case with Chinese family business structures in East and Southeast Asia (Redding 1990; Rademakers 1999). Cooperative relations between firms as well as business associations may develop but are not very likely to evolve as a dominant pattern of inter-firm organization in such circumstances.

The second type, characteristic-based trust, refers to groups wherein membership is based on kinship relations, religion, ethnicity, or corporate identity. Within these groups stable conventions of social behavior exist and are monitored through social control. Examples are kinship-based networks of Chinese family businesses and also networks of Japanese firms in which trust between employees is for an important part based on corporate (i.e., collective) identity. Characteristic-based trust is considered as basis of stable cooperative relations between firms. This is also considered true for the development of business associations. For instance, on the basis of ethnic characteristics, Chambers of Commerce for Chinese entrepreneurs have emerged in different parts of the world (Weidenbaum and Hughes 1996).

The third type of trust is institutionally-based and is tied to formal social structures, such as legal systems, in a society. Backed by the possibility of law-based sanctions, firms are able to reduce their perceived uncertainties about exchange relations by making use of written contracts. However, as Lane (1996: 284) pointed out, different types of legal systems exist that offer different degrees of certainty with regard to the use of formal contracts. For instance, the German system of commercial law (influenced by Roman law) is much more formal and detailed than its British counterpart. In Britain, the 'case-law' system prevails, which involves an empirical approach that yields more unpredictable outcomes. In contrast to their British counterparts, firms operating in the context of the more stable German legal system can reduce their risks more easily by basing their exchange relations on standard contracts. Firms in the British context are more likely to draw up detailed custom contracts for their exchange relations. Contrary to the standard contract system in Germany, this may hinder the development of stable long-term relations because it is very difficult to foresee future developments that affect the relationship.



The nature of the case-law system may raise the need for a source of more certainty in exchange relations, such as generally accepted standard contracts. The development of standard contracts, such as general agreements of trade, can be an important right of existence for business associations in societies with a case-law system. The effectiveness of these standard contracts, however, depends on the ability of business associations to offer arbitration services. This ability, in turn, depends on the membership of the association and the statutory power of the association.

### **3.4.3 Individualism vs. collectivism**

Cultural conventions in a society concerning the legitimacy of individualistic versus collectivistic behavior are seen as an important underlying factor in the formation and maintenance of inter-firm relations (cf. Nishida and Redding 1992). Such conventions reflect the relative ease of generating commitment between social actors on a non-personal or kinship basis.

A high level of individualism, as opposed to collectivism, involves the reducibility of collective institutions to individual self-interest (Whitley 1992b: 22). The prevalence of this form of individualistic behavior in a society is likely to hinder the development of long-term cooperative relations as opposed to more pragmatic and 'contractual' relations within limited time frames. On the contrary, societies where social norms dominate that support pursuing common goals and curb opportunistic behavior in exchange relations, constitute a more favorable environment for the development of cooperative inter-firm relations.

Business associations that are powerful enough to protect collective norms and values by influencing the behavior of individual actors are not very likely to develop in societies where the pursuit of individual self-interest is considered legitimate (cf. Bachmann 1998: 14). However, in such circumstances types of business associations may develop that serve the immediate self-interests of their members. Associations of this type are likely to be focused on the provision of individual services rather than collective goods. The reverse situation may occur in societies where norms and values favor collectivistic behavior of individuals and firms. In such circumstances, business associations may be developed for the organization of joint action. Such associations are likely to have a broad membership base that makes them relatively stable and powerful forms of collective action.

### 3.4.4 State involvement in the industry

The nature of state involvement in the industry is likely to affect in large measure the development of cooperative inter-firm relations (see, e.g., Hollingsworth et al. 1994; Whitley 1994; Lane 1995; Rademakers 1998a). Three distinct types of state involvement that reflect the relative commitment to coordinate industry development are distinguished here: 'developmental,' 'facilitating,' and 'laissez faire.' First, a 'developmental' state is actively involved in the coordination and control of industrial development. Government agencies are directly involved in strategies of firms through, for instance, controlling sources of credit. Examples of societies that represent the developmental state type are South-Korea (Zeile 1996: 269) and France (Groenewegen 1989). Second, a 'facilitating' state is also involved in industry development though in a more indirect way. Most initiatives for industry development are left to the firms involved. However, the facilitating state influences the direction of the developments to some extent through general policies that are supported by subsidies, levies, research, infrastructure, and educational systems. The German state, for example, reflects many features of the 'facilitating' state type (Lane 1995: 43). Third, a state of the 'laissez faire' type leaves the development of industries to the forces of supply and demand in free markets. Firms are largely left to their own devices and, within the boundaries of the law, the (immediate) right of the strongest prevails. The role of the state in industry is limited to issuing and sanctioning laws to limit market externalities owing to market failure such as environmental pollution, the exhaustion of resources, the emergence of monopolists, and ruthless competition. Countries such as Great Britain and the United States are considered examples of state behavior close to the 'laissez faire' type (Albert 1993).

The three contrasting types of state behavior with respect to industry differ considerably with respect to their influence on the development of cooperative inter-firm relations. In case of a 'developmental' state, the national government embodies an important source of business risks and opportunities. Hence, managers are likely to adhere a higher priority to securing good relations with state officials rather than developing cooperative relations with exchange partners (Whitley et al. 1996). In addition, not much space is left for self-administration via voluntary business associations, as this activity is more likely to be carried out by state agencies. Business associations may be involved as well, though in the sense of organizations with compulsory membership, which function as an extension of state agencies. Conversely, a 'facilitating' state is likely to foster the



development of inter-firm cooperation. Risks in the business environment are limited to some extent as the continuity and self-administration of industrial development is stimulated. This is also likely to have a positive influence on the development of business associations, which help to bundle the visions of managers on industry development and which can play an intermediary role between the industry and the government (cf. Van Waarden 1992: 551). Finally, in the case of a 'laissez faire' state, the industry environment of firms is largely unstructured. Such circumstances may stimulate firms to gain greater control over their environment by internalizing business risks via vertical integration and gaining market power via horizontal integration. This, in turn, will make the development of both long-term cooperative inter-firm relations and business associations less relevant. With respect to multi-lateral cooperation, however, the development of business associations in the more narrow sense of lobby organizations may be encouraged. These organizations provide firms with the needed critical leverage to promote their interests to the government, which is an important source of acts and regulations that can affect the profitability of the industry.

#### **3.4.5 The financial system**

The nature of the financial system in free market economies is considered to have strong implications for the development of cooperative inter-firm relations. Financial systems, as social institutions, can be broadly distinguished as 'capital-based' and 'credit-based' systems (Zysman 1983; Whitley 1990).

The key feature of the credit-based financial system is that long-term bank loans are the dominant way for firms to fill their capital needs. In addition, as the profitability of banks in such systems largely depends on the performance of their clients, they have closer relations with their client firms, rather than relations at arm's length. Examples of this 'bank capitalism' are the financial systems of such countries as Japan, Switzerland, and Germany (Johnson 1982: 206; Albert, 1993: 106; Lane 1995). Long-term bank credit implies a high stability in the supply of financial resources. This, in turn, allows managers to work with long time horizons with respect to the investment policies of their firm. The enhanced stability of firm behavior is considered to facilitate the development of both bilateral and multilateral cooperative relations between firms (cf. Lane 1996).

In contrast to its credit-based counterpart, capital-based financial systems are characterized by highly liquid capital markets as the major source of investment capital



for firms. In terms of capital provision, the role of banks is limited to the provision of short- and medium-term loans. As a result, firms in a capital-based financial system have to be more self-sufficient in financing their investments. Relations with banks are at arm's length, and firms are pressed to show short-term high returns on investments to anonymous capital suppliers to keep the firm's stock price on a safe level. Such circumstances are likely to encourage management to take a short-term attitude. This, in turn, implies swift changes in firms' policies that impede the development of cooperative inter-firm relations (Whitley 1992b). Similarly, business associations based on voluntary membership are not likely to become very relevant either. The instability of firm policies and the short-term view of management are considered to hinder joint efforts that contribute to the joint development of the industry.

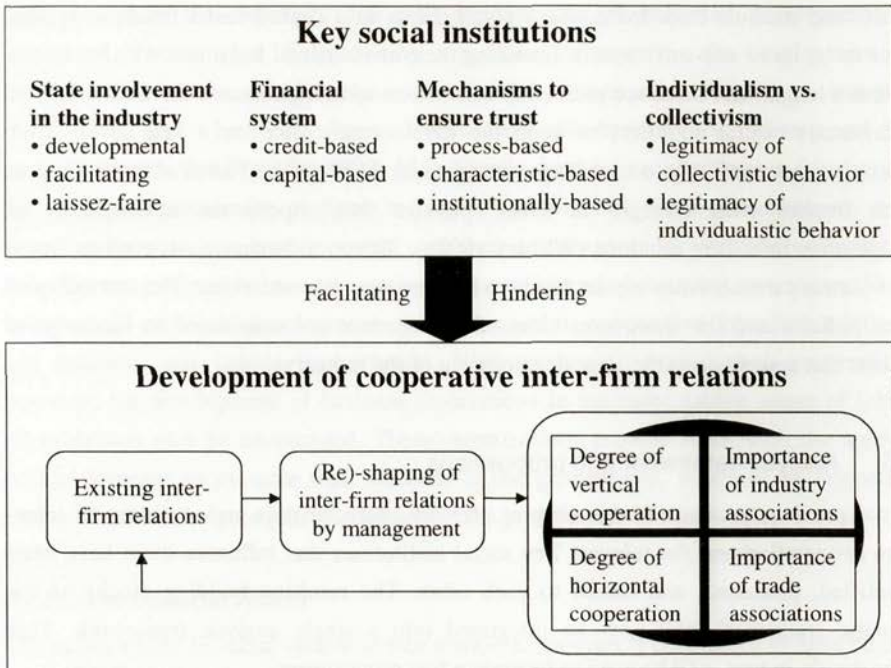
### 3.5 Analytic framework and propositions

In the previous sections of this chapter, the key characteristics and attributes of inter-firm cooperation and the relevant key social institutions that influence them have been identified, discussed, and linked to each other. The resulting building blocks of the analytic framework will now be integrated into a single analytic framework. This framework, in turn, will be used to formulate five propositions.

#### 3.5.1 The analytic framework

The concepts of both cooperative inter-firm relations and key social institutions discussed in this chapter are integrated in the analytic framework, which is presented in Figure 3.4.

The nature and influence of key social institutions have been addressed apart from each other, but it is stressed here that it is their *combined influence* that has to be taken into account if an analysis is made of forms of inter-firm organization. In addition, the suggested influence of key social institutions should not be considered as a straightjacket with regard to the analysis of patterns of inter-firm cooperation. As indicated earlier in this chapter, unanticipated solutions of firms for institutional pressures have to be taken into account as well. Moreover, due to the great complexity of the organizational phenomena investigated here, the findings of this study will be mainly tentative in nature.

**Figure 3.4** Analytic framework

Source: see text

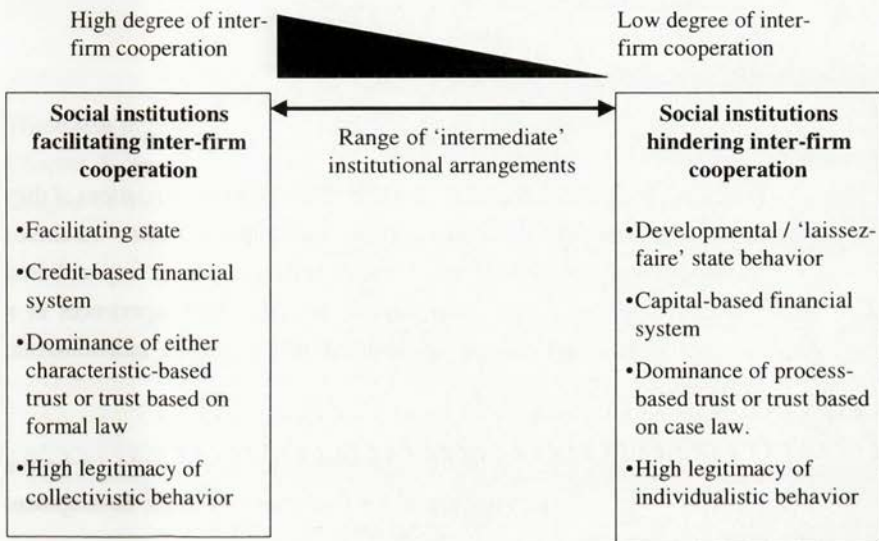
The application of the framework in cross-national comparative analysis implies a four-step approach. First, empirical data is collected on the attributes of inter-firm cooperation on the industry level in different countries (the UK and the Netherlands). Then the nature of key social institutions with respect to the industry is determined. Next, for each country the elements in the framework are analyzed in connection with each other, resulting in an image of the patterns of inter-firm cooperation in their national contexts. Finally, the patterns found are compared and contrasted with each other to gain insights into the connection between the nature of key social institutions and either industry or country-specific patterns of inter-firm cooperation.

### 3.5.2 Propositions

The analytic framework forms the basis for the formulation of propositions about the influence of key social institutions on the development of cooperative inter-firm relations.

As was pointed out earlier<sup>20</sup>, cohesive institutional arrangements are likely to channel and constrain the development of distinct and fairly stable patterns of inter-firm cooperation. On the contrary, if an industry is embedded in an environment with a variety of non-cohesive key social institutions, this is expected to result in fragmented and unstable patterns of inter-firm cooperation. Given this notion, two sets of key social institutions can be identified that are highly contrasting in nature. They represent the extremes of a continuum ranging from 'strongly facilitating' to 'strongly hindering' the development of cooperative inter-firm relations (see Figure 3.5). Obviously, there are many different 'intermediate' institutional arrangements possible that can be placed somewhere in between the extremes of this continuum<sup>21</sup>.

**Figure 3.5** Contrasting institutional arrangements



Source: see text

<sup>20</sup> See Section 3.4.1.

<sup>21</sup> For instance, a financial system within a particular national setting may appear not clearly 'capital based or credit-based' in nature but rather combine features of both types. Moreover, it is also possible that a particular institutional setting includes a combination of 'facilitating' and 'hindering' social institutions (see also the propositions in the remainder of this section).



On the basis of the continuum that reflects the expected degree of development of inter-firm cooperation in connection with a set of 'facilitating' and 'hindering' key social institutions, five propositions can be formulated. The first two propositions reflect the extremes of the continuum. The three remaining propositions represent institutional arrangements and degrees of inter-firm cooperation that are located in between these extremes.

*Proposition 1*

Firms are likely to develop cooperative rather than adverse inter-firm relations if they are embedded in an institutional environment that combines a facilitating state and a credit-based financial system, trust based on either collective identities or a formal law system, and cultural conventions that legitimate collectivistic behavior.

The above proposition is mirrored in the following one:

*Proposition 2*

Firms are likely to develop adverse rather than cooperative relations if they are embedded in an institutional environment that combines 'developmental' or 'laissez-faire' state behavior and a capital-based financial system with trust largely based on either past experiences or a case-law system and cultural conventions that legitimate individualistic behavior.

In a less extreme fashion, propositions can be formulated taking into account less cohesive environments which, however, may still be supportive or detrimental to the development of cooperative inter-firm relations.

*Proposition 3*

Firms are likely to develop cooperative inter-firm relations if they are embedded in an institutional environment in which key social institutions that are facilitating in nature are more dominant than the hindering ones.

Proposition 3 is mirrored in the following proposition:

*Proposition 4*

Firms are likely to develop spot-market relations if they are embedded in an institutional environment in which key social institutions that are hindering in nature are more dominant than the facilitating ones.

Finally, a proposition can be formulated which addresses the possibility that inter-firm relations are developed in an institutional environment without facilitating key social institutions dominating their hindering counterparts or vice versa.

*Proposition 5*

A disjointed pattern of cooperative and spot-market relations is likely to develop in industries that are embedded in an institutional environment in which there is no dominance of key social institutions that are either facilitating or hindering in nature.

These five propositions make explicit the *Leitmotiv* for the field research as reported in Chapter 5. In tune with this, the results of discussion of the empirical findings (in Chapter 6) will be fed back to the propositions formulated here.





Part II: *Field study*



## Chapter Four

### RESEARCH METHODOLOGY

*This chapter is about the methodological aspects of this study, i.e., where and how the research project was carried out to arrive at answers to the central research question. The criteria used to select firms and business associations for the case studies are addressed. Moreover, attention is paid to the data collection and analysis process involved in the comparison of cases between the UK and Dutch potato industries. The chapter concludes with a discussion of research quality issues including the reliability of the outcomes, as well as construct-, internal-, and external validity aspects.*

#### 4.1 The research process

A cross-national comparison of two 'national' cases (i.e., two industries in their national context) was conducted to gain insights in the influence of national social institutions on the development of inter-firm cooperation on the industry level. The cases were comprised of detailed descriptions of inter-firm relation characteristics (including the role of business associations) on the industry level and the nature of key social institutions in two different countries. The aim of the cross-national comparison was to reveal similarities and differences between the two cases in order to find empirical evidence to support the propositions on the influence of nationally distinct social institutions on patterns of inter-firm organization<sup>1</sup>.

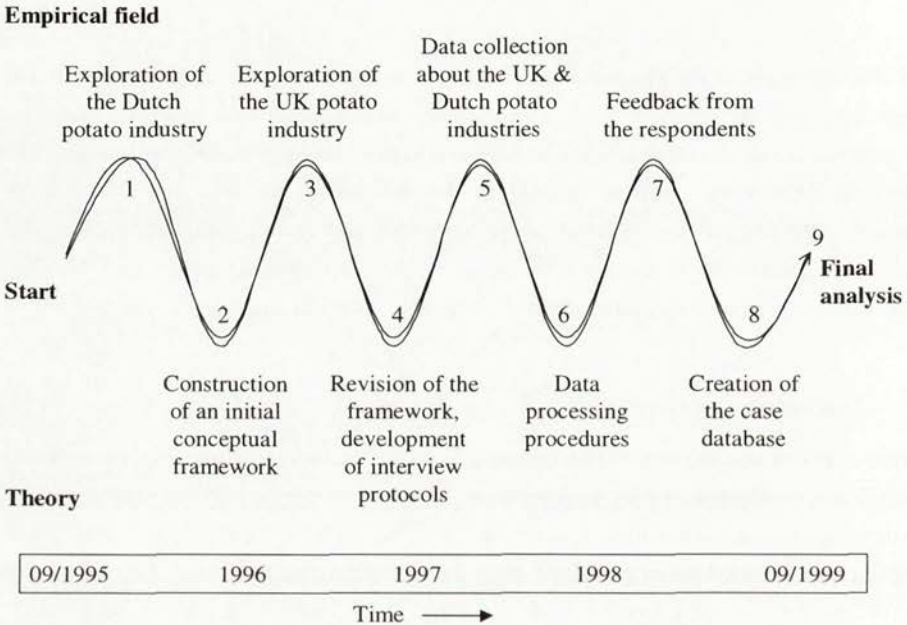
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<sup>1</sup> A two-sided comparative approach with four cases (two with fairly similar and two with different outcomes) would have been a more rigorous way to find evidence for the connection between forms of economic organization and nationally distinct institutional conditions (Liebersohn 1992: 109; Ragin 1987: 49; Djelic 1998: 14). However, given the available time and resources for the research project, it was not possible to conduct research in more than two countries.



As addressed in Chapter 1, the potato industries of the UK and the Netherlands formed the setting of this empirical research. The data collection and analysis processes that made up the comparison of cases are outlined in Figure 4.1. The ‘helix of research stages’<sup>2</sup> displayed in this figure reflects the interplay between theory and the empirical world. Theory was used to make sense of empirical findings and the results, in turn, were used to sharpen and refine theory to arrive at theoretically structured insights regarding the social phenomena under investigation (cf. Ragin 1992: 225).

**Figure 4.1** Outline of the research process



Source: see text

The research process comprised nine major stages and covered a time period that ran from September 1995 to September 1999. Research started in 1995 with an exploration of the Dutch potato industry (stage 1). An exploration was carried out to get acquainted with the industry on the basis of secondary sources including consultant reports, annual

<sup>2</sup> The use of the helix metaphor was inspired by a presentation by Peer Hull Kristensen at the EMOT Summer School in Helsinki, Finland, August 1997.

reports, industry-specific journals, and publications from research institutes, ministries, and banks<sup>3</sup>. In 1996, an in-depth case study was conducted on a merger between two potato trading firms. In this way, detailed knowledge was gained about the industry structure, products and markets, past and recent developments, key actors, interests, sensitivities, and other characteristics that helped to create a clear view of what was going on in the industry. Moreover, open interviews with directors/chairmen of firms and business associations were conducted to test the relevance of the initial concepts and frameworks that had been developed (stage 2). The pilot interviews were also useful for gaining access to organizations via the 'snowball sampling' principle (Babbie 1995: 287). In addition, as the number of organizations involved in the research project increased, it became easier to convince managers from other organizations to participate. This was also true for the UK<sup>4</sup> potato industry, which was explored in a similar fashion (stage 3). Open interviews were conducted with managers, secretaries, and/or chairpersons of business associations, the editor of a British periodical for the potato industry (*Potato Review*), professors, lecturers, and Ph.D. candidates of Wye College (University of London) and the University of Edinburgh, consultants, and two Dutch export managers. An overview of the organizations involved in the explorative stage of the research project is provided in Appendix I. The results of the explorations in both countries provided input for the revision of initial concepts and frameworks, and the development of interview protocols (stage 4). In addition, the explorations resulted in insight, which was necessary for the selection of firms, persons, and business associations to be involved in the data collection (stage 5), processing (stages 6, 7, and 8), and analysis (stage 9) stages of the research. These stages will be discussed in greater detail below.

## 4.2 Data collection and analysis

### 4.2.1 The selection of firms and business associations

Data was collected about the inter-firm relations of 12 Dutch and 17 UK-based potato firms. They were selected with the intention to include all leading firms (in terms of market share) and business associations in the comparative case study. In addition, a fair

<sup>3</sup> These organizations included, in particular, the (Dutch) Agricultural Economics Research Institute, the Dutch Ministry of Agriculture, the Dutch Ministry of Economic Affairs, and the Rabobank.

<sup>4</sup> In fact, of all the firms approached in the Netherlands and the UK, only one English potato processor responded negatively to the request for participation in the research project.

balance in the representation of firms per stage of the potato supply chain<sup>5</sup> in each 'national' case was sought (i.e., fairly equal numbers of potato processors and seed and ware potato merchants). Many firms appeared to be active in multiple stages of the supply chain. However, in general they had a clearly identifiable core business, which often turned out to be the activity they had performed since their establishment. Moreover, the selection of firms was made in such a way that large (more than 500 employees), medium-sized (50-500 employees), and small firms (employing 50 people or less) were included. As a consequence of the application of these selection criteria, no distinction was made with regard to three different firm types that can be found in the UK and Dutch potato industries, i.e., private firms, co-operatives, and private firms owned by co-operatives. Such a distinction was not considered relevant for this study because the aim was trace naturally occurring patterns of inter-firm organization (Orrú et al. 1991) between autonomous units of strategic decision making (Whitley 1987; 1996). Moreover, both from the explorative stage of the research project and the available literature (see, e.g. Lamont 1992) it appeared that the behavior of co-operatives and private firms in inter-firm relations is remarkably similar<sup>6</sup>.

Certain organizations were excluded from the comparative case study. Individual potato growers were not included because of their sheer numbers and their geographical dispersion. It was considered more practical and efficient to collect adequate information about farm-to-firm relations via the suppliers and customers of potato growers in the potato industry. Supermarket chains, restaurants, wholesalers, and their business associations were seen as organizations of different industries and were therefore excluded from the selection.

To sum up, the potato firms involved in this study were selected on criteria including market dominance, core business, and size. After applying these criteria to the Dutch potato industry, the final selection of Dutch-based enterprises included four firms with potato processing as their core business, four firms with a major stake in ware potato trade, and four seed potato merchants. The age of the firms ranged from more than 100 years to less than 10 years. The four selected potato processors represented at least 80% of the Dutch potato processing capacity for par-fried potato products (estimation based on interviews and annual reports of the Dutch business association VAVI). The four ware potato merchants were estimated to account for about 60% of the market for ware

<sup>5</sup> A graphical representation of the potato supply chain, as well as a discussion of players, structures, idiosyncrasies and developments in the UK and Dutch potato can be found in Chapter 5, Section 5.1.

<sup>6</sup> This is also confirmed by the findings from the field study reported in Chapter 5.



potatoes (estimation based on pilot interviews and annual reports). In the early nineties, the four seed potato merchants represented about 90% of the Dutch and 60% of the world market for seed potatoes (estimation based on research findings from Lamont (1992) and Renia (1997), and pilot interviews). The selection does not include breeder firms. The reason for this is that all major breeding activities in the Netherlands appeared to be integrated by seed potato merchants. Hence, it was not possible to select autonomous ('stand alone') breeder firms with a substantial market share in the Dutch potato industry. Table 4.1. presents the Dutch firms that have been involved in this study, including information about their date of establishment, core business, market ranking, and size (in terms of employees). In Appendix II an extensive overview can be found of the range of potato supply chain activities that each firm is involved in.

**Table 4.1** The Dutch potato firms involved in this study

	Firm	Est.	Market Ranking*	Core activity**	No. of employees
1	Agrico (NL)	1973	1-10	s, w	100-500
2	Aviko (NL)	1962	1-10	p	100-500
3	Eriva	1992	10-20	w	1-50
4	Farm Frites (NL)	1971	1-10	p	100-500
5	Hettema	1898	1-10	b, s	50-100
6	Koval	1972	1-10	w	1-50
7	McCain Foods (NL)	1972	1-10	p	100-500
8	Lamb-Weston/Meijer (NL)	1920	1-10	p	500-1000
9	Nedato	1962	1-10	w	50-100
10	Schaap	1965	1-10	s, w	100-500
11	Van Rijn	1855	1-10	s	100-500
12	ZPC	1919	1-10	s	100-500

Source: research database

\* Represents the interval of market shares (e.g. top-10). It provides an indication of the market position of the firm with regard to its core business.

\*\* b = breeding; s = seed potato trade; w = ware potato trade and/or pre-packing, p = potato processing.

The selection of potato firms in the UK included (in terms of their core business), five potato processors, five ware potato merchants, five seed potato merchants, and one

breeder. The five potato processors represented at least 80% of the UK potato processing capacity for par-fried potato products<sup>7</sup>.

**Table 4.2** The UK potato firms involved in this study

	<b>Firm</b>	<b>Est.</b>	<b>Market Ranking*</b>	<b>Core activity**</b>	<b>No. of employees</b>
1	Anglian Produce	1967	1-10	w	50-100
2	Aberdeen Seed Potato Org.	1978	<20	s	1-50
3	Baxter Avey	1984	<20	s	1-50
4	Bird's Eye Walls	1946	1-10	p	>1000
5	Branston Potatoes	1968	1-10	w	1-50
6	Esk Frozen Foods	1972	1-10	p	100-500
7	Fenmarc Produce	1968	1-10	w	100-500
8	Fisher Frozen Foods	1948	1-10	p	500-1000
9	Gordon & Innes	1947	1-10	s	1-50
10	Horberry & Baker	1944	1-10	s	1-50
11	Idwal Fisher	1976	1-10	p	100-500
12	MBM Produce	1990	1-10	w, s	500-1000
13	McCain GB	1967	1-10	p	500-1000
14	PBI Cambridge	1928	1-10	b	100-500
15	R&P Baker	1988	<20	s	1-50
16	Smillie Ltd	1959	<20	s	1-50
17	Worth & Co	1948	1-10	w	1-50

Source: research database

\* Represents the interval of market shares (e.g. top-10). It provides an indication of the market position of the firm with regard to its core business.

\*\* b = breeding; s = seed potato trade; w = ware potato trade and/or pre-packing, p = potato processing.

The five ware potato merchants were estimated to account for about 70% of the market for ware potatoes (estimation based on interviews, annual reports, and firm profiles). The six seed potato merchants that were included in the selection were well known (but often small) UK firms of which the market share, however, could not be estimated. The breeder was the only large firm of this type that was based in the UK. The age of the UK organizations ranged from several decades to less than 10 years.

<sup>7</sup> Estimation based on interviews, journal articles and an unpublished Wye college working paper by N. Wilson et al. (draft 1996).

Table 4.2. lists the UK potato firms involved in this study, including information about their date of establishment, core business, market ranking, and size (in terms of employees). In Appendix II, an extensive overview can be found giving the range of activities performed by each firm in the potato supply chain.

Data was also gathered on the relative importance of business associations. The business associations were selected on the basis of criteria similar to the ones used for the firms. The aim was to include a dominant trade association for every stage of the supply chain, as well as the major industry association(s) in the potato industries of both countries. Moreover, to facilitate cross-national comparison, trade associations representing firms in the same stages of the potato supply chain (e.g., associations for potato processors) were selected in both countries. In this way, the possibility was reduced of differences in functions performed by different types of trade associations.

**Table 4.3** The selection of Dutch business associations

	Name	Est.	Type	Focus
1	Commissie Aardappelen (CA)	1956/96*	Industry association	Entire Dutch potato industry
2	Nederlandse Federatie Pootaardappelen (NFP)	1952/98*	Trade association	Seed potato trade
3	Vereeniging ter Behartiging van den Nederlandschen Aardappelhandel (VBNA)	1938/98*	Trade association	Ware potato trade
4	Vereniging voor de Aardappel-verwerkende Industrie (VAVI)	1962	Trade association	Potato processing

Source: research database

\* The second date indicates a fundamental change in the organization (a merger and/or major change in mandate).

On the basis of the criteria, four business associations were selected that are entirely devoted to the Dutch potato industry, including one industry association and a total of three trade associations for potato processors, ware potato merchants, and seed potato merchants. Table 4.3 gives an overview and some details of the Dutch business associations that were selected.



In the UK, many business associations were found that were either fully or partially active, on a local or national level, in the potato industry. The selection of UK business associations resulted in a group comprised of one industry association and three major trade associations that matched the focus of their Dutch counterparts. Table 4.4 provides an overview of the UK business associations involved in this study.

**Table 4.4** The selection of UK business associations

	Name	Est.	Type	Focus
1	British Potato Council (BPC)	1934/97*	Industry association	Entire UK potato industry
2	National Association of Seed Potato Merchants (NASPM)	1940	Trade association	Seed potato trade
3	Scottish Potato Trade Association (SPTA)	1970	Trade association	Ware and seed potato trade
4	Potato Processors Association (PPA)	1968 ( $\pm$ )	Trade association	Potato processing

Source: research database

\* The second date indicates a fundamental change in the organization (i.e., a major change in mandate).

In conclusion, the selection of firms and business associations involved in the field study included virtually all of the leading organizations in the potato industries of both countries. Moreover, firms and business associations that are involved in all of the major stages of the UK and Dutch potato supply chain have been included in the selection (seed potato trade, ware potato trade, and potato processing). Seed and ware potato growers, and 'customers' of the potato industry such as supermarkets and restaurant chains were excluded from the selection.

#### **4.2.2 Data collection: interview types and protocols**

Information about the degree and nature of inter-firm cooperation in the UK and Dutch potato industries has been obtained by collecting data about characteristics of individual firms and business associations and by aggregating the results at an industry level. The relevant data was gathered from multiple sources including annual reports, consultant reports, journal articles, and interviews. Half-structured interviews made up the major data source, while the secondary sources were used to either add or check information.

Between January 1997 and August 1998, a total of 31 half-structured interviews were conducted with *key informants* (see Appendix III and Appendix IV). These informants (respondents) were the managing directors of firms and chairpersons/secretaries of the business associations in the Netherlands and the UK. These particular respondents were considered (and turned out to be) the most knowledgeable with regard to the information required, i.e., the nature of business-to-business relations and functions performed by business associations. At two large UK firms and one business association, the product and/or marketing managers were interviewed instead of the managing directors/chairpersons. In general, the respondents showed great willingness to participate in the research project in return for the final results. The firms and business associations were approached via personal networks, snowball sampling or directly by a letter followed by multiple telephone calls and fax messages. The letters contained, among others, an explanation of the purpose of the research, why the organization had been selected and which organization financed the project.

Depending on the respondents' willingness to provide detailed information, which varied to some degree, the interviews took between one to two hours. Because of time and financial constraints, a number of interviews were conducted by telephone. For these interviews the same protocol was applied as for the face-to-face interviews. Most telephone interviews took between 30 to 45 minutes. Although the telephone interviews were less in-depth in nature than the face-to-face ones, adequate data about firms and business associations were obtained which otherwise would not have been accessible. The telephone interviews were conducted with respondents at three Dutch and six UK potato firms, and two UK business associations. In addition, telephone interviews were used to complete the data about two Dutch firms that had been visited but had not yet provided all the information needed. Appendices III and IV provide details about the types of interview held at the organizations and the location of their head office.

To facilitate the data collection process, protocols were developed (cf. Yin 1994: 64). These protocols included address lists, preliminary data about the focal firms (e.g., journal articles), schedules of field visits, persons to be interviewed, and interview protocols. The interviews were taped<sup>8</sup> and transcribed. The resulting data was combined with information from secondary sources (if available) and then processed into reports. Moreover, the resulting interview reports were sent to the respondents with a request for

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<sup>8</sup> Two interviews were not taped as this was considered to lead to withholding of data by the respondent. In these instances notes were made. To minimize data loss and distortion the notes were processed into interview reports within 24 hours, including all data gathered (cf. Bourgois and Eisenhardt 1988: 819).



their comments and to check whether the data was correct. The feedback of the respondents was largely comprised of suggestions for minor adjustments. In addition, some requests were made to delete passages that were considered to be sensitive information by the respondents. Because these corrections only concerned additional data categories, no changes were made that would have altered data about inter-firm relation characteristics. After the interviews, the reports were corrected on the basis of the comments and were added to the case study database. After completion, the magnitude of this database totaled about 600 typewritten A4-sized pages.

The interviews at firms and business associations were conducted on the basis of an interview protocol. The protocols provided a general introduction for the respondents, both structured and open interview questions, and also explanations about the meaning of the concepts used. The telephone interviews were based on the same protocol (see Appendices V and VI). All respondents were provided with the interview questions in either a Dutch or English version. For the telephone interviews, the protocol was sent to the respondents in advance with the request to read it carefully beforehand. Most respondents followed the instructions in the accompanying letter and read the protocol before the interview took place. This helped to shorten the time needed for the actual interview and to identify issues that needed further clarification.

The interview questions for the firms and business associations were developed on the basis of concepts from the analytic framework (see Chapter 3) and deduced from the research questions (see Chapter 1). The interview was set up according to a two-step approach. A short and structured question was asked about every topic and was followed by an in-depth discussion about the background of the answer that was given. In this way, an overview was kept with regard to the combination of the time available and the topics covered. Moreover, this two-step approach facilitated a systematic analysis of the huge amount of data that was obtained during the interviews.

The questions for the interviews at the firms were designed to capture managerial perspectives on key attributes of inter-firm cooperation, levels of self-sufficiency, and the relative importance of business associations. All buyer and supplier relations of the selected firms were addressed. This meant that, in the case of vertically integrated firms which were not entirely self-sufficient, questions were asked about the inter-firm relations per activity of the firm in the potato supply chain. Depending on the amount of time available for the interview, additional questions were asked. Topics included



strategic developments, the role of the state, the sources of capital for investments, and structural changes in the industry. These issues had been treated in more detail in the pilot interviews during the explorative stage of the field research.

The interview protocol (see Appendix V for the English version) is divided into 6 sections that together covered the major information needs of this study. Section I of the interview protocol is aimed at capturing the range of potato supply chain activities of the focal firm and also to find out to which extent these activities were fully or partially owned. Next, in Section II, the focus is on the vertical (i.e., buyer and supplier) relations of the firm. To obtain data about the nature of these inter-firm relations, a four-point scale was used with the ideal types of 'spot-market' and 'cooperative' relations at the extremes. After an explanation of these concepts and the application of the four-point scale, the respondents were asked to characterize the vertical inter-firm relations of their organization<sup>9</sup>. In Section III, questions are asked about the basis of the vertical relations of the firm. Respondents were asked to indicate the importance of formal contracts and informal ties in their exchange relations, how easy (or difficult) it was to switch from one buyer or supplier to another, and the general duration of their vertical relations. Section IV treated the horizontal inter-firm relations by providing the respondents with a range of possible forms of horizontal business-to-business cooperation, which formed the starting point of an in-depth discussion about this subject. With regard to Sections II to IV, the respondents were asked to explain their choice for every interview question. This two-step approach yielded two different types of data. First, counting the scores from the scales that had been filled out by the respondents generated data that was semi-quantitative in nature (Hutjes and Van Buuren 1992: 67). Second, qualitative data was gathered by asking questions about the respondents' motivations for their choices and by asking for examples. This provided information to interpret and analyze the patterns of inter-firm cooperation found on the basis of the structured questions. It also helped to detect possible misinterpretations of the concepts by the respondents.

With the questions in Section V, data was obtained about the managerial perspectives on the relative importance of business associations. This was done by providing the respondents with a list of possible functions<sup>10</sup>, which were linked with a range of major

<sup>9</sup> The scale was deliberately comprised of an even number of steps. In this manner, the respondents could not avoid answering the question by choosing a 'neutral' characterization of their inter-firm relations (i.e., neither cooperative nor spot-market in nature).

<sup>10</sup> This list is discussed in detail in Section 3.3.3 of Chapter 3.

associations in their industry<sup>11</sup>. The respondents were asked if they were members of one of the associations listed and if there were perhaps others that were not listed. Some respondents in the UK added one or two business associations to the list. These associations, however, appeared not to be significant to most other firms in the industry and were therefore excluded<sup>12</sup>. Next, it was asked how relevant the functions were that the business associations performed for the member firm. The relevance of the functions was rated by the respondents on a three-point scale ranging from 'highly relevant' to 'moderately relevant' to 'not relevant.' To counter 'memory failure' (Mintzberg, Raisinghani and Théorêt 1976: 250) and to track down other possible biases, the same list of functions was presented to, and discussed with, the respondents from the business associations (see Appendix VI, Section III). The interview questions for the respondents of the business associations were preceded by an introduction of the research project (Section I). Moreover, the interview protocol for the business associations also included topics about the establishment of the organization (when, why, and by whom), the key functions performed in the past and at present, and expectations about the future role of the association (Section II).

Finally, in Section VI of the interview protocol for the UK and Dutch potato firms, general questions are asked with respect to, amongst others, the date of establishment of the firm, the number of employees, and the ranking of the firm in terms of market share.

#### **4.2.3 Data analysis: histograms and template analysis**

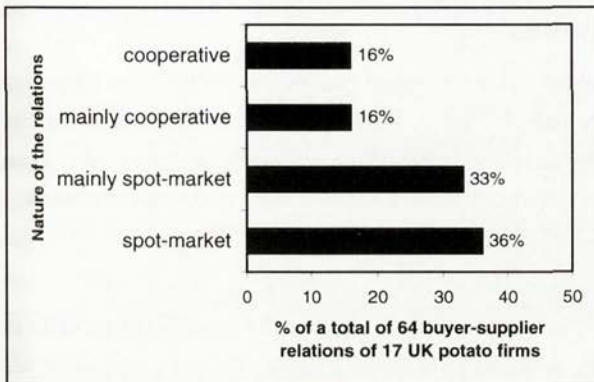
The analysis of the empirical data, of which the results are presented in Chapter 5, reflected the two-step approach used in the interviews. As a first step, the results from the structured interview questions were aggregated by adding up the scores produced by the respondents. The resulting figures were transformed into histograms to provide a graphical image about the relevance of each item. Figure 4.2 provides an example of such a histogram, which was constructed as follows. All the scores from the 4-point scales about the nature of the vertical relations (i.e., customer and supplier relations) of the firms involved were added up. The raw data and the totals of scores that were used to arrive at the histogram in Figure 4.2 can be found in Appendix VII. Note that many

<sup>11</sup> The list of major business associations was put together on the basis of the results of the explorative research stage.

<sup>12</sup> Most business associations that were added by the respondents were organizations that operated either on a limited geographical basis (membership limited to firms from Wales or Scotland or England) or across multiple industries.

firms were active in multiple stages of the potato supply chain and therefore had multiple buyer-supplier relationships. The histogram shows the resulting scores for each item of the 4-point scale. The items are represented as percentages of the total number of vertical relationships of all the firms involved. The histogram shows that the vertical relations of the selection of 17 UK potato firms were perceived to be predominantly spot-market in nature by the managers interviewed.

**Figure 4.2** Example of a histogram derived from the interview data



Source: interview data

The histograms derived from the interview data were added to the case study database. In addition, the histograms were used to generate a comparative overview of the characteristics of inter-firm cooperation that had been found in the UK and Dutch potato industry.

The second step of the data analysis concerned a 'template analysis' (King 1998: 119) of the interview reports. On the basis of a topic list, the text of interview reports was scanned line by line to identify all relevant data about attributes of inter-firm cooperation and to allocate the information to relevant categories. Annual reports, company histories, and journal articles about the firms (if available) were treated in the same manner. The topic list, which was used as a data filter, mirrored the subjects covered by the interview questions. Apart from the pre-defined topics, the template also allowed for the creation of new categories on the basis of unanticipated patterns that emerged from the data. This resulted in the creation of additional data categories



including, among others, the perceptions of respondents about codes of 'good behavior,' and the views of the role of banks and the state on firm and business association behavior. The resulting body of processed data, which was transformed into documents and added to the case study data base, presented a source of detailed information about attributes of inter-firm co-operation in the UK and Dutch potato industry. The contents of the documents were used for the interpretation of the aggregated data in the histograms (see Chapter 5).

### **4.3 Reliability and validity issues**

In the research design of the present study a range of quality aspects has been taken into account including reliability, construct validity, internal validity, and external validity (cf. Hutjes and Van Buuren 1992: 51; Yin 1994: 33). Some of these aspects have been touched upon in the previous sections but will be discussed more systematically below.

#### **4.3.1 Reliability**

The reliability of the research results was enhanced by making explicit the procedures that had been followed for data collection. This was achieved by using protocols (see Section 4.2), recording the interviews on tape, and feeding back edited transcriptions of the tapes to the respondents. Moreover, a case study database was built, comprised of electronic data files of the reports of the pilot studies, the revised reports of the interviews at firms business associations, and documents with processed data. Secondary information was also included in the database, though generally not in an electronic form but in an archive. This type of information included several volumes of Dutch and British journals devoted to the potato industry, as well as annual reports of firms and business associations, company histories, journal and newspaper articles, and consultant reports.

#### **4.3.2 Construct validity**

Construct validity was supported through a set of measures. To test the relevance of initial concepts and frameworks, pilot interviews were held and a case study was conducted of a merger between two Dutch potato firms. This was done in an early stage of the research process. In addition, the protocol-guided two-step approach in the data collection stage worked as a two-edged sword with regard to construct validity. On the

one hand, highly structured interview questions (which were based on the analytic framework in Chapter 3) prevented deviations from the central research concepts. On the other hand, the in-depth discussions that followed these questions allowed obtaining deeper insights into the respondents' perceptions of the meaning of the concepts used. This lowered the risk of response bias during the interviews. Moreover, the semi-structured nature of the discussions allowed for the discovery of unanticipated but useful information.

Data triangulation was used as well to increase construct validity. Although the major source of evidence was formed by interview data, the available secondary data proved very useful in gaining additional information about the research issues. For instance, several journal articles were found in which details could be found about mergers, alliances, and visions of managers on cooperation. In addition, multiple sources of evidence were used during the data collection about business associations. The same questions about the functions performed by these organizations were asked in the interviews with both managers of potato firms and persons working for the business associations. In addition, the annual reports that were obtained from the business associations contained much useful information about the functions performed by these organizations.

Finally, the principles of 'peer debriefing' and 'member check' (Wester 1987) were applied to avoid, as much as possible, the subjective influences of the researcher in the use of the research concepts. Peer debriefing took place via meetings with the two supervisors of the research projects, and via the presentation of preliminary findings at conferences in 1996, 1997, 1998, and 1999<sup>13</sup>. Member check (i.e., the discussion of the findings with respondents) was done by sending transcripts to the respondents. Moreover, post-interview meetings took place with some of the respondents at occasional gatherings in both the UK (annual fair) and the Netherlands (seminar and annual business association meeting) in 1998.

#### **4.3.3 Internal validity**

For the discussion of the internal validity of the present research it is useful to make a distinction between deterministic and probabilistic propositions about causal relationships, as proposed by Lieberman (1992: 106). Deterministic propositions claim that a given factor, when present, will lead to a specified outcome. In contrast,

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<sup>13</sup> See Appendix XI for an overview of the papers presented at these conferences.



probabilistic propositions claim that a given factor, when present, will increase the likelihood of a specified outcome. The propositions that guided this research (see Chapter 3, Section 3.5.2) were probabilistic in nature because deterministic claims would have required the consideration of all independent variables that influence inter-firm cooperation. Given the complexity of the phenomena under investigation (i.e., social institutions and forms of economic organization), this requirement was considered extremely difficult to meet, if achievable at all.

To arrive at insights into the relationship between social institutions and the development of inter-firm cooperation, the principle of 'pattern matching'<sup>14</sup> was applied. The empirical data from the field study was subjected to an intensive search for patterns in the key attributes of inter-firm cooperation. This 'patterning' was based on qualifications given by the respondents with respect to the relative degree of development and/or relevance of these attributes. In addition, the nature of relevant social institutions was described and linked with the patterns that had been found. The resulting 'national' cases, comprised of patterns of inter-firm cooperation and the nature of key social institutions, with their similarities and differences, were compared and contrasted with each other. Finally, the results were compared with the propositions about the likely influence of social institutions on the development of inter-firm cooperation (see Chapter 6).

To promote the internal validity of the research further, measures were taken to reduce 'control effects' and 'biased viewpoint effects'<sup>15</sup> (Wester 1987) during the data collection and analysis stages of the research. Both disturbing effects were moderated via peer debriefing (the exposure of the results to peers) as well as by member check, i.e., feeding back the interview and (intermediate) research results to the respondents (see the previous section).

#### 4.3.4 External validity

The external validity of the research outcomes, i.e., the domain to which the findings can be generalized, has been demarcated by the propositions that were formulated after the construction of the analytic framework (see Chapter 3). In accordance with the

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<sup>14</sup> Cook and Campbell (1979) in: Yin (1994: 106).

<sup>15</sup> Control effect: the researcher evokes divergent behavior from the respondents; Biased viewpoint effect: misinterpretations caused by selective perceptions of the researcher.



principles of 'analytic generalization'<sup>16</sup> (Yin 1994: 31), the propositions about the influence of social institutions on the development of inter-firm cooperation have been compared with the empirical findings of the field study. As a result, the research findings could be used to support theory development that go beyond generalizations about the industries that were investigated to produce empirical data. In other words, the findings about the social construction of cooperative inter-firm relations not only generated insights about the Dutch and UK potato industries but also were considered useful to general theory development about the social construction of forms of economic organization.

#### 4.4 Summary

The research design of this study concerned a cross-national comparative analysis of similar industries in two different countries. The aim of this comparison was to obtain insights into the influence of national social institutions on the development of inter-firm cooperation. The research process was comprised of 9 major stages that reflected a continuous interplay between theory and practice. The stages included (1) the exploration of the Dutch potato industry; (2) the construction of an initial conceptual framework; (3) the exploration of the UK potato industry; (4) the development of a revised conceptual framework and the development of interview protocols on the basis of this framework; (5) the data collection stage in which interviews were held at UK and Dutch potato firms and business associations; (6) the initial data processing stage; (7) the inclusion of feedback from the respondents in the data; (8) the final data processing stage and the creation of a research database; and (9) the final data analysis. The research project started in September 1995 and was finished four years later, in 1999.

The exploration of the UK and Dutch potato industries started at the end of 1995 and lasted until mid-1996. This stage included desk research, pilot cases, and pilot interviews at firms, universities, and business associations. The major data collection stage started at the beginning of January 1997 and lasted until August 1998. Data about the inter-firm relations was collected at 12 Dutch and 17 UK firms in the potato industry. The selection of firms included virtually all leading firms across the UK and Dutch potato industries, representing total market shares of up to 80% per stage in the

<sup>16</sup> That is, generalization towards a more or less general theory, in contrast with statistical generalizations about relations between variables in a narrowly defined population.

potato supply chain. Farms and customers of the potato industry (such as supermarkets and restaurant chains) were excluded from the comparative case study. The selection of Dutch firms included four potato processors, four ware potato merchants, and four seed potato merchants. The selection of UK firms included five potato processors, five ware potato merchants, six seed potato merchants, and one breeder. Business associations were also included in the research. Four Dutch business associations were selected, including the national industry association and the trade associations for potato processors, ware potato merchants and seed potato merchants. The selection of UK business associations matched with their Dutch counterparts and included one industry association and three major trade associations.

Data about the managerial perceptions of the way UK and Dutch potato organizations coordinate and control their inter-firm relations was obtained from semi-structured interviews with the managing directors of the selected firms and the chairmen and/or secretaries of the business associations. Additional data was gathered from secondary sources including annual reports, consultant reports, journal articles, and interviews. A large majority of the interviews was conducted in person and a minority of the interviews was done by telephone. The interviews were based on an interview protocol that included a list of open questions and pre-structured answer categories for the respondents. The questions for the interviews at the firms were designed to capture managerial perspectives on key attributes of inter-firm cooperation, levels of self-sufficiency, and the relative importance of business associations. The interview protocols designed for the business associations included topics about the functions they performed in the past and present, the reason of their establishment and future developments. All except two interviews were taped, transcribed, and fed back to the respondents. Finally, the interview data that was obtained at each organization was written up in interview reports.

The data analysis was carried out according to a two-step approach. Results from the pre-structured interview questions were processed into histograms. The results from the 'template analysis' of the contents of the interview reports were added to the information reflected by the histograms. This analysis was conducted on the basis of a topic list that was used to allocate all the information from the interview reports to categories. These categories, in turn, formed a 'template' that reflected the key concepts from the analytic framework.

A range of methods and techniques for qualitative research was used to enhance the reliability and validity of the results. Reliability was enhanced through the use of fixed procedures for data collection, which included interview protocols, taping the interviews, and feeding back edited transcriptions to respondents. In addition, a case database was built including all electronically recorded documents pertaining to the study. Construct validity was ensured by conducting pilot interviews and making use of interview protocols that structured data collection, but also allowed for the discovery of unanticipated though useful information. The in-depth discussions with respondents during the interviews lowered the risk of 'response bias.' Data triangulation and the application of techniques such as 'peer debriefing' and 'member check' helped to enhance construct validity as well. The latter two techniques also promoted internal validity as they moderated the subjective influences of the researcher on the use of the research concepts. The internal validity of this study was enhanced by formulating propositions and by making use of 'pattern matching' to find relationships between social institutions and the development of inter-firm cooperation. Finally, the external validity of the research was enhanced by demarcating the 'domain of generalization' by propositions about the influence of social institutions on the development of inter-firm cooperation. Moreover, in line with the principles of 'analytic generalization', the propositions were compared with the empirical findings.





## Chapter Five

### INTER-FIRM COOPERATION IN THE UK AND DUTCH POTATO INDUSTRIES

*This chapter presents the results from the field study that was conducted in the UK and Dutch potato industries in the period 1997-1998. The major supply flows and key actors are introduced and attention is paid to important structural developments that took place in the second half of the 20<sup>th</sup> century. Then, detailed and systematic descriptions are made of the vertical and horizontal inter-firm relations in the UK and Dutch potato industry. The research results are processed in overviews that provide a concise view of the bilateral forms of inter-firm cooperation and the relative importance of business associations in the potato industries of both countries.*

#### 5.1 The UK and Dutch potato industries

The Dutch and UK potato industries are quite similar to each other in many respects. As will be shown below, they involve similar types of firms and products. Other similarities concern structural developments such as increasing demands from customers and an ongoing concentration of firms. However, there are also significant structural differences between the potato industries in both countries that can be linked with important developments in the past. The similarities and differences between the UK and Dutch potato industries will be outlined in the sections below.

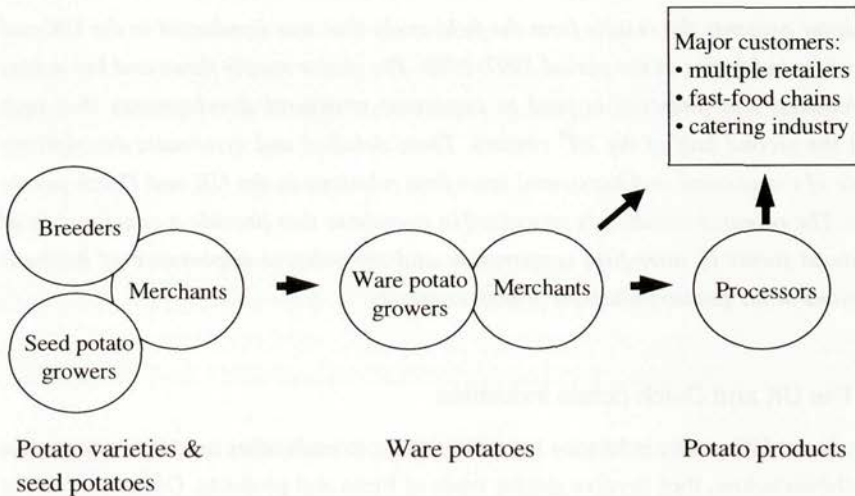
##### 5.1.1 The potato supply system

Major products of the UK and Dutch potato industries include potato varieties, seed potatoes, ware (edible) potatoes, and potato products. The greatest challenge of firms in this industry is to secure a stable supply of high-quality products at low costs, which is

considered not very easy. The potato is a natural product and therefore very sensitive to environmental conditions that can change by the day.<sup>1</sup>

The Dutch and UK potato industries are comprised of three major clusters, as displayed in Figure 5.1. The first cluster is concerned with the development, production, and trade of the basic (i.e., genetic) material needed for large-scale potato production. The cluster includes potato variety development (by breeders), seed potato growing (by farmers), and seed potato trade (by merchants). The breeders aim to develop new potato varieties with enhanced properties, which are then propagated by seed potato growers and marketed/exported by seed potato merchants.<sup>2</sup>

**Figure 5.1** Clusters in the potato industry



Source: see text

The seed potatoes from the first cluster are used to grow plants that produce ware potatoes with predictable properties<sup>3</sup>. This is done by the second cluster, which involves

<sup>1</sup> For instance, the growth and quality of potatoes is subject to weather and disease, while the price of this perishable product can vary greatly under the influence of tensions between supply and demand.

<sup>2</sup> The development of a new, commercially applicable potato variety takes about 10 to 15 years. The development of a sufficiently large supply base of seed potatoes (which have to be as disease free as possible) takes about four years more.

<sup>3</sup> Ware potatoes can be grown on the basis of seeds (called 'true potato seed') as well. Apart from developing countries, however, this way of potato growing is not widely practiced. The problem is that



the growing, handling, and trade of edible potatoes by ware potato farmers and merchants. Ware potatoes are generally destined for either fresh consumption or further processing. In the case of fresh consumption, potatoes are collected by ware potato merchants/exporters who wash, grade, and pre-pack<sup>4</sup> the potatoes for the retail market. If the potatoes are destined for further processing, the crop is collected, graded, and traded by merchants or directly sold by farmers to potato processors.

Potato processing firms make up the last cluster, where potatoes are used as a raw material for the production of a wide range of products. This cluster can be subdivided into three distinct segments: starch production, crisp making, and the manufacturing of a broad range of potato products such as french fries and components for meals. With regard to the first segment, it must be noted that the EU starch market is subject to a quota system. In addition, the European market for potato starch is dominated by a large Dutch co-operative (AVEBE), while starch production is virtually absent in the UK. The second segment, i.e., the production of potato crisps, stands out as a single firm that dominates both the Dutch and UK markets<sup>5</sup>. Moreover, crisp making requires very particular (e.g., very round) potatoes and the transport costs of the final product are relatively high. As a consequence, this potato processing activity involves supply situations that are quite different from the other two. Regarding the distinct nature of these parts of the potato-processing cluster, they have not been involved in the field research. The third segment of the cluster in both countries is comprised of Dutch, UK, Canadian, and American firms that process raw potatoes into a wide range of either pre-fried, frozen, crisped, chilled, dried, or canned potato products.

Finally, as shown in Figure 5.1, the major customers of firms in the UK and Dutch potato industries include retail organizations, fast-food restaurant chains, and wholesalers.

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every seed, in principle, represents a new potato variety with not entirely predictable properties. This is considered a problem for large-scale commercial applications which require stable and predictable properties (Renia 1997).

<sup>4</sup> Pre-packing potatoes for retailers is also carried out by specialized firms ('packers'). In the Netherlands this type of firm has become virtually extinct, while in the UK the situation develops in the same direction. In general, potato pre-packing has become an integrated activity of ware potato merchants.

<sup>5</sup> The global crisps market is dominated by the US-based corporation Pepsico, with market shares in the UK (Walkers) and the Netherlands (Smiths) well over 50% (interview notes FC1).

### 5.1.2 Key organizations, production locations, and export positions

Most leading firms in the UK and Dutch potato industries are located in areas where also the bulk of the seed and ware potato crop is grown. In the UK, major areas are East Anglia, East Midlands, and Scotland (Poppe 1989: 13). In the Netherlands, the majority of potato firms are located in the 'polders' and in the northern and southwestern provinces. In both countries seed potato production is concentrated in the northern parts.

The ware potato and potato processing clusters in the UK potato industry are dominated by relatively few but large firms which are highly integrated. The largest potato processor by far is McCain Foods GB (of Canadian origin). In ware potato trade and handling MBM Produce (part of Hilldown Holdings plc.) and the marketing co-operative Anglian Produce are the major players. The growth, trade, and handling of seed potatoes in the UK is dominated by relatively small Scottish<sup>6</sup> firms such as Gordon & Innes and Caithness Potatoes, which operate both in domestic and export markets. Breeding activities have become relatively marginal in the UK, certainly if compared with the Netherlands and Germany.

An outstanding characteristic of the Dutch potato industry is the presence of very large potato processors that mainly produce for export markets. Key players include Aviko (owned by two Dutch co-operatives), McCain Foods NL (Canadian), Farm Frites (Dutch), and Lamb-Weston/Meijer (an American-Dutch joint venture). Among the ware potato merchants, the major players include large, small, and medium-sized firms such as Nedato, Agrico, Koval, and Schaap. The seed potato trade and breeding activities in the Netherlands are dominated by Dutch co-operatives such as ZPC and Agrico, and private firms including Hettema<sup>7</sup>, Meijer, and Van Rijn.

Both in the UK and the Netherlands, thousands of farms are involved in seed and ware potato growing. However, acreage of farms in the UK are generally much larger than in the Netherlands<sup>8</sup>. Nevertheless, the supply of potatoes in the Netherlands is considered less fragmented than in the UK because most of the Dutch potato trade is carried out by

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<sup>6</sup> This dominance can be related to the favorable climate for growing seed potatoes in Scotland. The relatively low temperatures in this part of the UK reduce the spread of plant disease and aphids. This is important, as high-quality seed potatoes need to be free from viruses and other harmful organisms.

<sup>7</sup> In the second half of 1998, ZPC (a co-operative) and Hettema (a private firm) presented their plans to integrate their activities. In 1999 these plans were realized.

<sup>8</sup> According to Poppe (1984: 10), UK farms are among the largest in the EU. In general, their acreage is about four times larger than the acreage of their Dutch counterparts.



marketing co-operatives. Another contrast is that, in the UK, it is not unusual that growing potatoes is at least in part an integrated activity of merchants and processors. Both in the UK and Dutch potato industries, various business associations are active. In the UK, a multitude of business associations can be found. Both general and highly specialized trade associations exist, with membership based on combinations of product type, markets served, and/or the production location of firms (i.e., Wales, England, Scotland or Northern Ireland). Trade associations with a more nation-wide membership base include the SPTA (Scottish Potato Trade Association), NASPM (National Association of Seed Potato Merchants), and the PPA (Potato Processors Association). Both the SPTA and NASPM further the interests of seed and ware potato merchants, although the focus of the NASPM is on seed potato merchants. Most (but not all) members of the SPTA are Scottish firms involved in ware and/or seed potato trade. Many NASPM members are integrated firms that are involved in both seed and ware potato trade. Apart from trade associations, one industry association is active in the UK potato industry as well. This association, the BPC (British Potato Council), is involved in all stages of the potato supply chain.

Dutch trade associations for potato firms include the NFP (Nederlandse Federatie Pootaardappelen), VBNA (Vereniging ter Behartiging van de Belangen van den Nederlandschen Aardappelhandel), and VAVI (Vereniging voor de Aardappelverwerkende Industrie). The VBNA represents the Dutch ware potato merchants, while the NFP is an association for seed potato merchants<sup>9</sup>. The VAVI is the Dutch association for potato processors. In contrast with the UK, these trade associations have no direct competitors because there are no other associations for potato firms active in the Dutch potato industry. The industry association of the Dutch potato industry is the CA (Commissie Aardappelen). This is not an autonomous organization such as the BPC, but a sub-division of the quasi-governmental Productschap voor de Akkerbouw (i.e., a general Industry Board-like organization for agriculture).

Notwithstanding the fact that the Dutch and UK potato industries involve the production of similar products, they differ quite markedly from each other with respect to their export performance. Over the past decades, Dutch seed and ware potato merchants, as well as potato processors, have gained a very strong international presence. Most of the

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<sup>9</sup> In 1998 these two organizations merged. However, this did not involve any substantial alteration in the functions performed for the members.



domestic production is exported to countries within the EU. However, the Middle East, former Soviet states, and countries in East- and Southeast Asia form important destinations as well. In addition, Dutch potato processors have expanded their production activities across Europe, the Americas, and the Middle East. In contrast, apart from some Scottish seed potato exporters, most UK potato firms are much more focused on their large geographically and relatively isolated domestic market.

### 5.1.3 Structural developments

In the second half of the 20<sup>th</sup> century both the UK and Dutch potato industries have witnessed considerable structural changes. Major drivers were the large-scale mechanization of potato growing, the internationalization of markets, the emergence of potato processors as prominent players in the industry, the introduction of breeders' rights, changing consumer needs, and the growing power of a small number of large retailers and fast food restaurant chains.

#### *Large scale mechanization*

In the late 1960s, ware potato growing in the Netherlands became rigorously mechanized (Van den Bosch and Veerman 1980a: 45). Before that time, growing, and harvesting potatoes was mainly done manually. However, as labor became scarce, wages went up and the price for potatoes remained high for some years. As a result, investing in the mechanization of potato growing became an attractive option for many farmers. The mechanization efforts involved a vast increase of capital investments. Therefore, more and more farmers enlarged the scale of their operations to lower the fixed costs per hectare. Consequently, the domestic production of potatoes grew tremendously while the number of growers dropped with more than 1000 a year (Van den Bosch and Veerman 1980b: 928). The increased yield of potatoes, combined with a maturing domestic market forced Dutch potato firms to find new markets in order to survive. As will be addressed more in detail below, new major sales opportunities were created through the development of export markets and by taking advantage of the growing demand for processed potatoes.

During the same time period, the situation in the UK was quite different from the Netherlands. In terms of acreage, UK farms traditionally were much larger than their Dutch counterparts. Moreover, to UK farmers the growing of grain was (and still is) much more important than potato production. Rather, potatoes were considered as a

'break crop' (Poppe 1984: 11). Another contrast with the Dutch situation is the remarkable stability over several decades, of the acreage used by UK farmers to grow potatoes. This stability was due to the tight regulation of the area used for potato production in the UK. Under these conditions, there was no need for a rigorous mechanization of potato growing. In addition, searching for new markets became no serious issue as the market regulation in the UK largely matched home production with home demand.

### *Internationalization*

The development of both the UK and Dutch potato industries has been affected by the internationalization of their markets as well. Dutch firms took advantage of the early internationalization of the European market for agricultural products that came with the creation of the Common Agricultural Policy in the late 1950s and early 1960s. In the period 1963-1973 that followed, Dutch potato exports (measured in tons) grew by 200% (Van den Bosch and Veerman 1980a: 46).

The firms in the UK potato industry experienced internationalization as well, but this happened both much later and more rigorously. From 1933 until 1996, the UK potato market was regulated on the basis of an area quota system. When the country became a member of the European Economic Community (EEC) in the early 1970s, however, this system came more and more under pressure. For instance, firms from EEC member countries (in particular the Dutch) took advantage of the opportunity to export potatoes to the UK. In response, the UK government initially restricted these imports from the Continent. However, on the basis of a judgement of the Luxembourg Court in 1979 the restriction of potato imports (and other main crops) by the UK had to be lifted (PMB 1987). Despite of this, it took until 1997 before the regulation of the potato market in the UK ended. From that year onwards, the UK potato industry became fully exposed to the forces of the free market system. The first to take advantage of this new situation were the large supermarket organizations and potato processors in the UK, who gained more opportunities to specify and control the quality of their potato supplies.

### *The rise of potato processors*

The structure of both the Dutch and UK potato industries has changed quite considerably under the influence of potato processors. In both countries, the first potato processing firms emerged in the 1960s. Taking advantage of growing consumer preferences for more convenience, the potato processors developed into prominent



players in the decades that followed. In the Netherlands, most potato processing firms were established by farmers and merchants who tried to find new markets for the increasing domestic supply of ware potatoes. From the late 1960s onwards, the potato processing capacity in the Netherlands has been growing at a remarkable speed while the supply of ware and seed potatoes remained sufficient to cover the increasing need. However, in the 1990s the growth slowed down and a considerable shakeout among firms took place. Nevertheless, the Dutch potato industry had become more and more adjusted to the needs of a handful of very large potato processors, which together accounted for the majority of potato purchases in the Netherlands. In the second half of the 1990s the Netherlands had even become a net importer of ware potatoes as a result of the raw material needs of potato processors, which, in turn, exported about 90% of their output.

In the UK, potato processors have become important players as well, although to a lesser extent if compared to the Netherlands. In contrast, pre-packed fresh potatoes have remained the major outlet for ware potatoes grown in the UK<sup>10</sup>. Most of the output of potato processors located in the UK is produced for the domestic market rather than for export.

### *Breeders' rights*

The ratification of the regulation for breeders' rights by both members and non-members of EEC countries in 1966 meant another important development for the potato industries in the UK and the Netherlands. These rights, which are comparable to patents, imply that potato varieties only can be used (i.e., propagated) under agreement with the breeder<sup>11</sup>. The strategic implication was that breeders gained control over the propagation of new, so-called monopolized potato varieties (Van den Bosch and Veerman 1979). Newly developed varieties can have properties that enable users to gain competitive advantage (e.g., because of higher yield, better taste, etc.). For this reason, access to these excellent but monopolized varieties has become an important strategic issue for potato firms. In the UK and the Netherlands, this has pushed many firms to

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<sup>10</sup> For instance, the domestic potato crop for human consumption amounted to app. 5169.000 tons in the season June 1994-May 1995. 3524 tons were destined for fresh consumption, while the remaining 1717.000 tons were used for potato processing purposes (figures drawn from an unpublished report by N.Wilson, Wye College, app. 1996).

<sup>11</sup> In 1995 the registration of plant variety rights was unified under new EU-legislation (Renia 1997). Before that time, new varieties had to be registered separately in every country.



either integrate vertically into breeding activities or to engage in some form of cooperation with breeders.

### *The rise of large customers*

In the late 1980s and early 1990s, large supermarket chains and fast-food restaurant chains gained a dominant market position with respect to their suppliers, including potato firms in the UK and the Netherlands. Food retailers broadened their product range in response to consumer demands for more variety and higher quality at a reasonable price. As a consequence, they increased the scale of their operations to remain profitable. In tune with this, many takeovers and mergers among food retailers took place. This resulted into a high level of concentration of retailers, i.e., a small number of large firms began to dominate the market<sup>12</sup>. The large supermarkets and the large fast-food chains (such as McDonalds) put intense pressure on firms in the potato industry to supply larger quantities of high-quality products in more varieties at lower prices. Moreover, firms were pressed to develop food safety systems that enabled buyers to track down the origin of their purchase as well as the production methods used. As a result, the level of mutual dependence between firms in this industry grew considerably (Rademakers 1999). This led to an increase of vertical integration through takeovers, mergers, and collaborative arrangements between potato firms (Rademakers 1998b). Moreover, in tune with the concentration among their major customers, both the UK and Dutch potato industries witnessed a dramatic decline in the number of firms across all stages of the supply chain while the total output remained stable or went up (Rademakers and McKnight 1998; Dadson 1998). By the end of the 1990s the concentration in the potato industries of both countries had become quite high. Currently, not more than a handful of firms dominate one or more clusters of the supply chain.<sup>13</sup>

## 5.2 Inter-firm relations in the UK potato industry

The sections below provide a detailed description of the nature of inter-firm relations in the UK potato industry. The description is structured along the lines of the analytic framework outlined in Chapter 3. The attributes of vertical inter-firm cooperation are

<sup>12</sup> E.g., Tesco and Sainsbury's in the UK, and Royal Ahold and De Boer Unigro in the Netherlands.

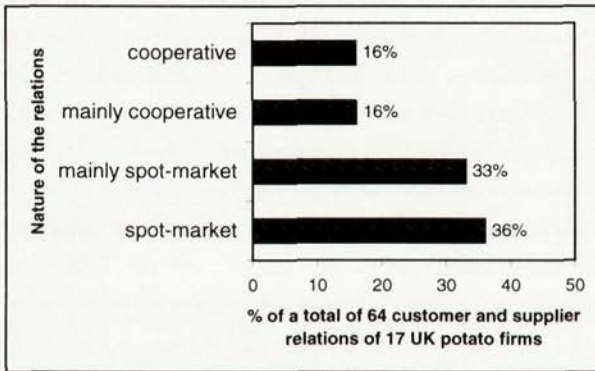
<sup>13</sup> The number of farmers declined considerably as well, but several thousand farmers remained involved in the industry though none became dominant.

treated first, followed by a discussion of the horizontal relations in the industry. Finally, attention is paid to the relative importance of business associations as forms of inter-firm cooperation in the UK potato industry.

### 5.2.1 Customer and supplier relations in the UK

Most customer and supplier relations in the UK potato industry are spot-market in nature. Figure 5.2 shows a graphical representation of how UK potato firm managers perceive the nature of the vertical relations of their organization. As can be seen, more than two-thirds of the total number (64) of the customer and supplier relations of the 17 firms involved were considered to be mainly or entirely spot-market in nature. In the remainder of this section, the attributes of these relations will be addressed in detail to gain a fuller understanding of the way vertical inter-firm relations in the UK potato industry are coordinated and controlled.

**Figure 5.2** The nature of customer and supplier relations in the UK potato industry



Source: interview data<sup>14</sup>

#### *Flows of information*

Most of the information exchange between UK potato firms is directly concerned with (and limited to) transactions. In accordance with this, a manager remarked that '*In this industry, vertical relations are dominated by negotiations about price, quality, and quantity.*' Consequently, inter-firm relations involving flows of information surpassing

<sup>14</sup> See Appendix VII for the data and the criteria used to arrive at this graph. The data is based on the answers of the UK managers to the questions in Section II of the interview protocol (see Appendix V).

the transactional level are not very common. If present, such forms of information exchange in the UK potato industry appear to be largely limited to seed and ware potato merchants, who share experiences with growers. Other exceptions were found among UK-based firms involved in breeding. Some appeared to have informal relations with large retailers, potato processors, and merchants. In these relations, the breeders generally receive information about needs and requirements for new potato varieties, while potential (direct or indirect) customers remain informed about the development of commercially attractive varieties.

Exchange of knowledge between UK potato firms appears quite rarely. Some of the largest firms in the industry (processors, merchants, and retailers) educate and counsel ware potato growers about crop treatment to increase yields, quality, and/or environmental soundness. However, the flows of knowledge involved are one-way and tend to be directly linked to (or part of) supply contracts.

#### *Flows of mutual expectations*

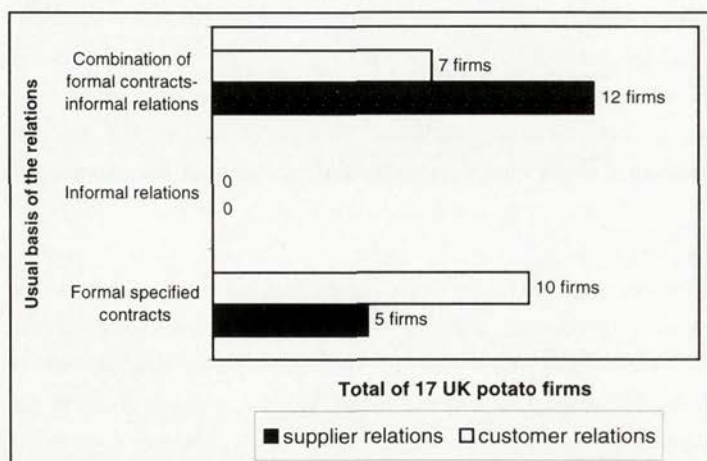
As is shown in Figure 5.3, supplier relations<sup>15</sup> in the UK potato industry tend to be based on a combination of formal contracts and informal ties. Unlike the supplier relations, most relations with customers were found to be based on formal contracts. Furthermore, transactions entirely based on trust and mutual obligations (i.e., implicit contracts) were considered relevant neither for customer nor for supplier relations.

The basis of supplier relations appears to vary quite strongly with the size of the potato firms in the UK. The largest firms tend to make use of highly specified contracts. A manager of a large firm explained that '*We use precise contracts specifying what to produce, how to do it and when to deliver.*' In contrast, the medium-sized and smaller firms generally use fairly standardized contracts to formalize the oral agreements preceding most transactions. Most explanations of the smaller-firm managers stressed, as one of them put it, that '*We do not specify everything.*' Their contracts are limited to the specification of information needed for a transaction (e.g., price, tonnage, variety, and time of delivery). In addition, some firms make use of general conditions of sale that have been developed by their business associations.

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<sup>15</sup> Supplier relations: the exchange relations of firms with their suppliers of potato varieties, seed potatoes, and/or ware potatoes.



**Figure 5.3** The basis of customer and supplier relations of leading UK potato firms

Source: interview data<sup>16</sup>

The dominance of highly specified contracts in the exchange relations with customers<sup>17</sup> must be seen in light of the detailed specifications issued by – in particular – the large customers, including fast food restaurant chains and retail organizations. Firms such as McDonalds are almost notorious for the amount and tightness of the specifications for their supplies. Moreover, the large retailers in the UK require that their supplies of fresh produce are grown according to formal plans (schemes) that involve ‘integrated crop management’ (ICM). As a result, contracts with these major customers of potato firms are often embedded in ‘schemes’ such as the Assured Produce Scheme and Nature’s Choice. The schemes aim for safe, environmentally sound and controllable food production and are comprised of protocols about, for instance, the use of pesticides. In addition, these schemes compel farmers to produce evidence about the way they have grown their crop (often referred to as ‘traceability’).

The findings about the relative dominance of combinations of formal and informal contracts and the irrelevance of entirely informal ones can be clarified as follows.

<sup>16</sup> The aggregated results of the answers of UK managers to question 1 in Section III of the interview protocol (see Appendix V).

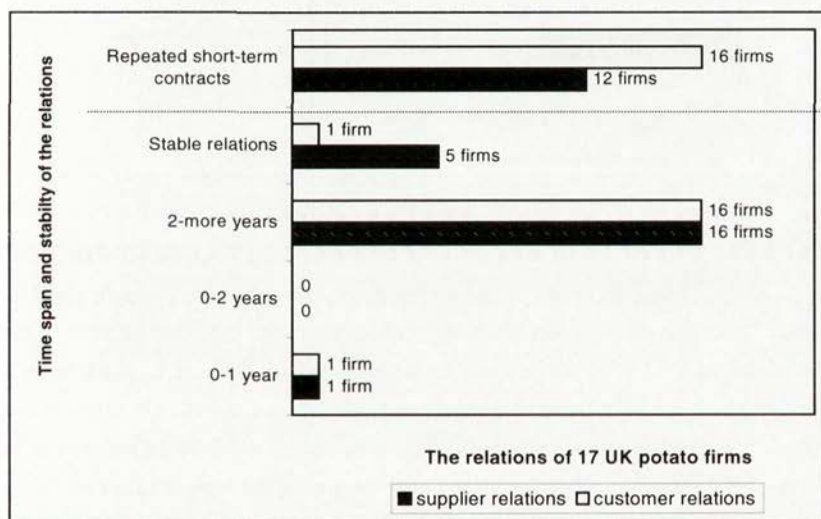
<sup>17</sup> Customer relations: the exchange relations of firms with their customers that include buyers of potato varieties, seed potatoes, ware potatoes and/or potato products.

Without exception, the respondents regarded the reputation of their firms as an important basis for trust in exchange relations with suppliers and customers. On the contrary, mutual obligations were considered not relevant at all because the relations involved were principally impersonal and also adverse in nature. Put differently, relations between the firms tend to be loose and are generally viewed in terms of win-lose rather than win-win opportunities. In general, the supplier and customer relations of UK-based firms are based on either highly specified or standard contracts, in a lesser extent on a firm's reputation, and hardly ever on mutual obligations.

#### *Flows of resources and activity links*

Vertical inter-firm relations in the UK potato industry generally have a short-term time horizon. This finding is based on the responses of management to questions about the usual time span of their exchange relations in general (see Chapter 4). The relations appeared to be largely limited to discrete transactions/contracts for one (harvest) season.

**Figure 5.4** The time span and stability of vertical relations in the UK potato industry

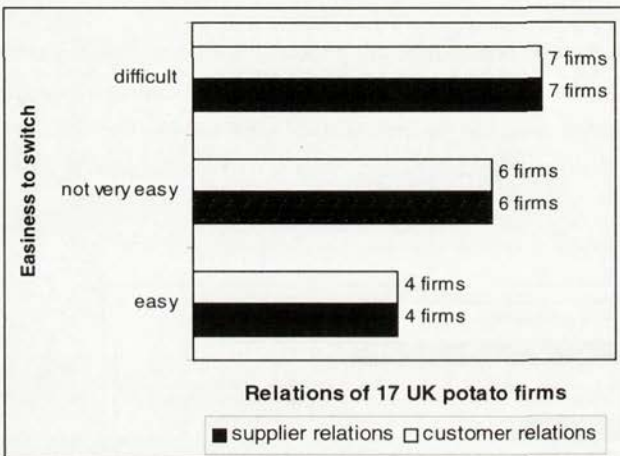


Source: interview data<sup>18</sup>

<sup>18</sup> The aggregated results of the answers of UK managers to question 3 in Section III of the interview protocol (see Appendix V).

However, as shown in Figure 5.4, most relations are long-term in nature in the sense that they are comprised of short-term contracts that are repeated over multiple years. The preference for the use of repeated short-term contracts was explained by the respondents with statements such as: *'It is not necessary to keep shopping and changing ... basically, if a supplier does not give the service you want, you just go to another one.'* However, potato firm managers appeared to consider it not very easy and even difficult to change from buyer or supplier (see Figure 5.5).

**Figure 5.5** The ease for UK potato firms to switch to another customer or supplier



Source: interview data<sup>19</sup>

It was also pointed out that, because of the ongoing concentration of firms in the UK potato industry, both buyers and suppliers have become larger but also scarcer. This effect has been enhanced by the large retail organizations, which aim to work with a limited group of preferred suppliers. Moreover, because firms increasingly tend to use particular potato varieties and have high quality requirements, lock-in situations occur in which it is difficult to switch to another buyer or supplier. A manager explained: *'It is not easy to find potatoes of a particular variety with the quality you are used to on the short term ... you don't know up front what the quality is like with other companies.'* Similar remarks from other respondents indicated that firms in the UK potato industry

<sup>19</sup> The aggregated results of the answers of UK managers to question 2 in Section III of the interview protocol (see Appendix V).



prefer to work with a stable set of buyers and suppliers to reduce uncertainties about quality issues. Most firms realize this aim by working with recurrent short-term contracts. In this way, the parties involved are always free to switch partners without having problems after the fulfillment of the contract. The contracts are simply repeated as long as it is commercially attractive and therefore remain loose in nature.<sup>20</sup>

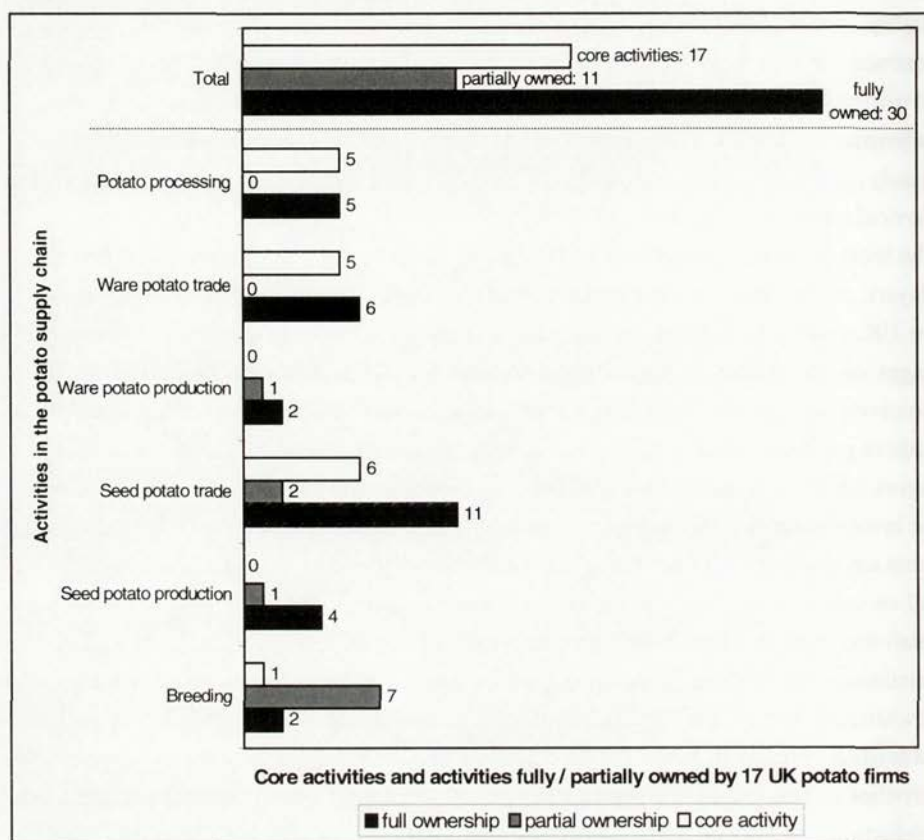
### *Vertical integration and self-sufficiency*

The level of vertical integration of UK potato firms varies considerably. The few major players, as well as some smaller firms that together dominate the potato supply flows in the UK, display high levels of integration. They have built up positions in virtually all stages of the domestic potato supply chain for either fresh or processed potatoes. However, also a substantial number of 'niche players' are active in either seed potato trade or potato processing.

Figure 5.6 presents an overview of the activities across the UK potato supply chain and the involvement of firms in these various activities through ownership. It appears that 17 firms are involved in 41 activities in total, either on the basis of partial (joint venture) or full ownership. Not shown in the figure is that the firms involved in just one activity are small and medium-sized potato processors (4) and small seed potato merchants (3). The remaining 10 firms are involved in two or more activities. It can be seen that in the downstream end of the supply chain (i.e., potato processing and ware potato trade) ownership virtually overlaps the core activity of the firm. The opposite is the case with activities in the rest of the (upstream part) of the supply chain, including ware potato production, seed potato trade, and production and breeding. Among a total of 37 fully or partially owned activities, there are just 7 that are considered as a core business of the firms involved. It indicates that firms in the downstream end of the potato supply chain are integrated backwards to secure their control over supplies. This is in particular highlighted by the involvement of ten firms in breeding activities, while it is the core activity of just one firm. Apparently, firms that focus on other stages of the supply chain but have a stake in breeding activities find it important to have direct control (via ownership) over the development of new potato varieties.

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<sup>20</sup> An example of the spot-market nature of these repeated short-term contracts was exemplified in a BBC TV news item in May 1998. In this news item, the power of large supermarkets over their suppliers was questioned. A case was presented of a potato grower who said he got ruined when he was set aside by one of his major customers. The grower had supplied this retailer for years and had made substantial investments to meet the demands of that firm.

**Figure 5.6** Vertical integration and core activities of UK potato firms

Source: interview data<sup>21</sup>

Most UK potato firms have achieved vertical integration through takeovers and joint ventures. The general philosophy behind the integration efforts is that competitive advantages can be achieved by *'Having control over every aspect of the business.'* Moreover, the activities controlled by the integrated firms tend to be aimed at self-sufficiency, rather than trade with other firms. Hence, it seems that firms in the UK potato industry prefer to have full or at least partial control over the supplies for their

<sup>21</sup> The aggregated results of the answers of the UK managers to the questions in Section I of the interview protocol (see Appendix V and also Chapter 4, Section 4.2.2).

core activity. In line with this observation, the firms that dominate the UK potato industry are highly integrated firms with high degrees of self-sufficiency.

### Overview

Table 5.1 provides an overview of the findings concerning the relevance of the attributes of inter-firm cooperation for firms in the UK potato industry. Flows of information between buyers and suppliers are generally limited to discrete transactions, while knowledge exchange appears to be not a common practice for UK firms. The basis of vertical inter-firm relations is generally centered on either highly specified or standard contracts, in a lesser extent on a firm's reputation, and hardly ever on mutual obligations. In addition, most vertical inter-firm relations are based on recurrent short-term contracts and tend to have short time horizons. Risk sharing between buyers and suppliers virtually does not occur. Moreover, the industry is dominated by firms that are both vertically integrated and highly self-sufficient. In short, the pattern of the attributes of vertical inter-firm cooperation in the UK potato industry reflects a strong dominance of spot-market relations.

**Table 5.1** Attributes of vertical inter-firm cooperation in the UK potato industry

Key attributes of cooperative customer-supplier relations		Relevance
<i>Flows of Information</i>	• Surpassing transactional information	—
	• Exchange of knowledge	—
<i>Flows of mutual expectations</i>	• Relations largely based on mutual trust	—
<i>Flows of resources and activity links</i>	• Long-term time horizon	—
	• Risk sharing	—
<i>Integration of activities</i>	• Degree of vertical integration	+
	• Degree of self-sufficiency	+

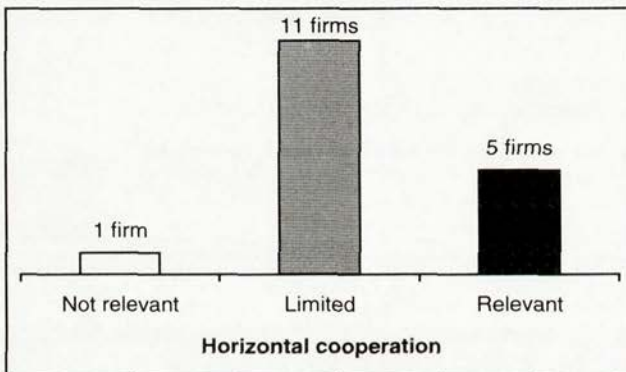
Source: see text



### 5.2.2 Horizontal inter-firm relations in the UK

In the UK potato industry competing firms also cooperate with each other, though only to a very limited extent (see Figure 5.7). Horizontal cooperation is largely limited to information exchange (12 out of 17 firms). For instance, potato processors in the UK talk to each other and exchange general and technical information that is considered not commercially sensitive. In addition, respondents of seed potato merchants pointed out that *'It is a small world and of course we talk to each other ... for instance about experiences with new potato varieties.'* Other topics that are discussed among competing firms include governmental regulations, the circumstances under which the potato crop grows and is harvested, and developments in overseas markets. Much of this information exchange appeared to be facilitated by business associations (see next section).

**Figure 5.7** The perceptions of managers of 17 UK potato firms about the relevance of horizontal cooperation



Source: interview data<sup>22</sup>

Some of the large and medium-sized UK potato merchants work together with competitors in joint ventures that are concerned with breeding activities (5 out of 17 firms). The joint ventures are formal organizations, based on explicit agreements between the parties involved. With regard to breeding activities in general, it was remarked that it is common practice (i.e., an implicit agreement) for breeders to exchange information and seedlings and to share test fields for experiments with the

<sup>22</sup> The aggregated results of the answers of the UK managers to question 1 in Section IV of the interview protocol (see Appendix V).

growing of new potato varieties. However, breeding is not a very dominant activity in the UK potato industry. The focus of most firms is on other parts of the supply chain. Marketing co-operatives, as forms of horizontal cooperation between growers of seed- and ware potatoes, are quite rare in this industry. Rather, the bulk of the UK potato crop is marketed by individual farmers or via private traders. Most co-operatives are very small, located in Scotland and involved in seed potato trade. The only co-operative with a substantial presence in the UK potato industry is involved in ware potato trade and located in England.

Other attributes of horizontal inter-firm cooperation appear to be not relevant or extremely rare in the UK potato industry. The relative weak development of horizontal cooperation between firms was explained by several respondents stressing that '*Firms in the UK like to do their own thing.*' Table 5.2 summarizes the findings concerning the attributes of horizontal inter-firm cooperation in the UK potato industry.

**Table 5.2** Attributes of horizontal inter-firm cooperation in the UK potato industry

Key attributes of horizontal co-operation		Relevance
Flows of Information	• Information exchange	+
	• Knowledge sharing	—
Flows of mutual expectations	• Implicit agreements	—
	• Explicit agreements	+/-
Flows of resources and activity links	• Joint investments	+/-
	• Mutual shareholdings	—
	• Equipment sharing	—

Source: see text

### 5.2.3 The relative importance of business associations in the UK

The discussion of the relative importance of business associations in the UK potato industry will be done on the basis of the possible functions that have been identified in Chapter 3. The sequence followed here is determined by the degree of relevance of the functions to trade associations.

#### *Promotion of interests*

UK trade associations particularly distinguish themselves as lobby organizations. As one secretary put it: '*We lobby for self-interest as hard and often as we can.*' Both the

associations and their members see this lobby function as one of the most important reasons for the existence of these organizations. The trade associations promote their members' interests either via direct contacts with state officials<sup>23</sup> or via their representation in the quasi-governmental industry association BPC. Most trade associations also promote the interests of their members with respect to regulations developed on the EU level. This is done either on the basis of direct contacts with EU officials or via seats in European peak associations.

#### *Dissemination of knowledge and information*

The dissemination of information, and in a lesser extent knowledge, is regarded as an important task for both trade- and industry associations in the UK. The provision of access to information about new and changing governmental policies and regulations on local, national, and European levels is considered most relevant. The chairmen and/or secretaries of the business associations generally have good access to governmental circles, which is necessary to keep informed. The business associations also collect information about both technical (e.g. new lifting techniques) and market developments (e.g. weekly prices and other general market information). The dissemination of this information is accomplished in multiple ways, including conferences and seminars, study tours, newsletters, minutes of meetings, and direct mail services. Most of the information is quite general, but nevertheless considered quite useful. Some information services of the business associations are commercial in nature and imply some degree of competition with other organizations. For instance, an important role in the dissemination of knowledge and information in the UK potato industry is played by a well-established and independent magazine, *Potato Review*. The activities of the firm behind this magazine, to a certain degree, overlap with the information services of broad and nation-wide operating business associations such as the BPC.

#### *Facilitation of horizontal cohesion*

At first glance, the facilitation of horizontal cohesion through regular face-to-face communication between directors and/or managers of firms seems to be quite strongly developed in the UK. However, the membership base of the trade associations is far from inclusive as well as quite fragmented. As a result, firms operating in similar

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<sup>23</sup> Occasionally, the SPTA is consulted by (Scottish) governmental agencies when new standards are set and inspection schemes are developed for seed potatoes.



markets may be members of different trade associations or have no membership at all. This, in turn, severely limits the impact of the 'platform function' provided by the trade associations. This is different for the industry association, which has a compulsory membership base. However, the BPC is not seen as an organization that is very deeply involved in the facilitation of horizontal cohesion. The organization constitutes a meeting place for representatives of industry branches, rather than for members.

The trade associations in the UK tend not to be a center of regular meetings between their members. In addition, most trade associations work with either elected or ad-hoc sub-committees of members to tackle practical problems. The people involved in these committees are not always the directors of (units of) member firms, but generally are the senior managers. The industry associations as well as the trade associations stimulate the development of horizontal cohesion among their members in some extent through the organization of seminars and annual gatherings.

#### *Facilitation of vertical cohesion*

The facilitation of vertical cohesion in the industry is not considered a very relevant function of trade associations in the UK potato industry. Nevertheless, some respondents noted that the associations play a role in this respect. This is due to the presence of some highly vertically integrated firms that are members of various associations. Hence, meetings organized by trade associations often involve firms that operate in multiple stages of the potato supply chain. However, vertical cohesion, in the sense of having a joint strategic view about the development of the industry, is not deliberately facilitated. Rather, the largest firms in the industry, in particular large multiple retailers, determine the direction in which the industry develops.

Most potato firm managers were uncertain about the role of the industry association BPC in the development of vertical cohesion. Nevertheless, one of the (quite recent) priorities of this organization is to enhance the cohesion in the UK potato industry.

#### *Development of common rules*

Trade associations in the UK are involved in the development of common rules, though only in the narrow sense of general conditions of trade. These conditions of trade are copyrighted and to be used by members only. The development of other possible common rules or codes of behavior by trade associations was not considered very relevant. In general, respondents remarked that the development of common rules should be a task of the government, rather than business associations.

The industry association is involved in the development of general rules for firms in the industry, though also to a limited extent. The industry association has statutory powers, but, to date, these have been used only to set up a levy system to finance their operations. The trade associations in the UK potato industry never have had any statutory powers.

#### *Arbitration*

In connection with the general conditions of trade, some of the trade associations in the UK potato industry provide arbitration services to their members. It was noted that arbitration is only possible in conflicts between members of the association who make use of these general conditions. The industry association is not involved in any form of arbitration.

#### *The coordination of industry-wide crisis*

Some of the possible activities of business associations appeared very weakly developed in the UK potato industry. With regard to actions of business associations in cases of industry-wide crisis, the respondents noted that not many crisis-like situations have occurred in the UK potato industry. The general view is that, if a crisis would occur, the initiation and coordination of actions would be a task for the government. The role of associations is expected to remain limited to a consultative role and to keeping firms informed in such events.

#### *The initiation and coordination of joint activities*

For trade associations, the initiation and coordination of joint activities, to be carried out or financed by their members on a voluntary basis, is not considered very relevant in the UK. The respondents regarded initiatives of associations for joint research not impossible, but pointed out that such actions are quite exceptional in the industry. The general view among UK potato firms is that joint promotion and research is something that should be initiated (and paid for) either by the government or the levy-financed industry association BPC. Financed by levies paid by the members and contributions of the government, the BPC had an annual research budget of about £2 million to commission and monitor projects in 1997.

An overview of the roles and functions of business associations in the UK potato industry is shown in Tables 5.3 and 5.4. The histograms that have been used as a point of departure for the above analysis can be found in Appendix IX.

**Table 5.3** The functions of trade associations in the UK potato industry

Relevance	Functions
<i>Strong</i>	<ul style="list-style-type: none"> <li>• Promotion of interests (lobbying)</li> <li>• Dissemination of knowledge and information</li> </ul>
<i>Moderate</i>	<ul style="list-style-type: none"> <li>• Facilitation of horizontal cohesion</li> <li>• Facilitation of vertical cohesion</li> <li>• Development of common rules</li> <li>• Arbitration</li> </ul>
<i>Weak</i>	<ul style="list-style-type: none"> <li>• Coordination in cases of industry-wide crises</li> <li>• Initiation and coordination of joint activities</li> </ul>

Source: see text

**Table 5.4** Functions of the UK industry association

Relevance	Functions
Strong	<ul style="list-style-type: none"> <li>• Dissemination of knowledge and information</li> <li>• Initiation and coordination of joint activities</li> </ul>
Moderate	<ul style="list-style-type: none"> <li>• Development of common rules</li> <li>• Promotion of interests</li> <li>• Facilitation of horizontal cohesion</li> <li>• Facilitation of vertical cohesion</li> </ul>
Weak	<ul style="list-style-type: none"> <li>• Coordination in cases of industry-wide crises</li> </ul>
Not relevant	<ul style="list-style-type: none"> <li>• Arbitration</li> </ul>

Source: see text

In conclusion, the membership base of trade associations in the UK potato industry is quite fragmented. Membership is voluntary and the trade associations are far from inclusive. Moreover, these organizations have no statutory powers, while the range of functions performed is not very wide. Lobbying and the dissemination of information are seen as the most important activities, while the remaining possible functions are considered either moderately or weakly relevant. The industry association of the UK



potato industry has a compulsory membership base. The organization is linked to the government and has statutory powers that, among others, enables them to impose levies and allocate licenses. The range of functions considered strongly relevant for the industry association is, in fact, broader than that of the trade associations. Based on these findings, Table 5.5 presents a summary overview of the indicators for the relative importance of business associations in the UK potato industry.

**Table 5.5** The relative importance of business associations in the UK potato industry

	<b>Trade associations</b>	<b>Industry association</b>
<b>Membership base</b>	Fragmented (voluntary)	Inclusive (compulsory)
<b>Statutory powers</b>	Not relevant	Present
<b>Range of functions</b>	Not very broad	Fairly broad

Source: see text

### 5.3 Inter-firm relations in the Dutch potato industry

The following sections describe the attributes of vertical and horizontal inter-firm cooperation that have been found in the Dutch potato industry. In accordance with the description of the situation in the UK potato industry, attention is paid to the flows of information, mutual expectations, and resources and activity links in both vertical and horizontal inter-firm relations. Moreover, the degree of vertical integration and self-sufficiency of the Dutch potato firms is addressed. The last section discusses the functions performed by the business associations in the Dutch potato industry.

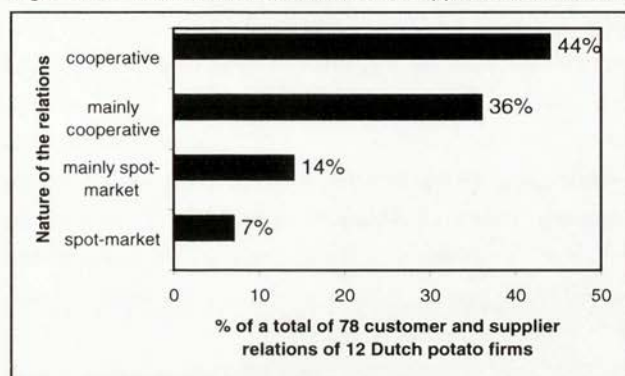
#### 5.3.1 Customer and supplier relations in the Dutch potato industry

Most vertical relations of Dutch potato firms are cooperative in nature. Figure 5.8 shows the aggregated results of the perceptions of the managers of 12 Dutch potato firms with respect to the nature of their total of 78 customer and supplier relations<sup>24</sup>. The figure shows a clear dominance of vertical inter-firm cooperation over spot-market relations. Spot-market relations exist, but to a limited extent and mainly concern the trade in non-

<sup>24</sup> Customer-supplier relations: i.e., the relations of the firms involved with their customers and suppliers. See Appendix VIII for the data and the criteria used to arrive at this graph.

monopolized potato varieties such as ' Bintje.' The motivations and remarks that have been made about the nature of the inter-firm relations of Dutch potato firms will be addressed below.

**Figure 5.8** The nature of customer and supplier relations in the Dutch potato industry



Source: interview data<sup>25</sup>

### *Flows of information*

The vertical relations of Dutch potato firms generally involve the exchange of knowledge and information that goes far beyond transactional aspects. In particular, the large Dutch seed potato merchants, who are also deeply involved in breeding activities, share knowledge and information with their suppliers and customers. They work with a very stable and loyal supplier base that exists of (semi-professional) breeders<sup>26</sup> and seed potato growers. The exchange of knowledge and information in these ongoing relations is concerned with such issues as the development of new potato properties and the improvement of crop treatment techniques. These quite intensive contacts support the aim of the merchants to secure a stable supply of high-quality seed potatoes, which is seen as an important competitive strength. The seed potato merchants generally have well-developed relations with their customers as well, including large potato processors, ware potato merchants, growers, and sometimes also retailers. Through these relations,

<sup>25</sup> See Appendix VIII for the data and the criteria used to develop this graph. The data comes from the answers of Dutch managers to the questions in Section II of the interview protocol (see Appendix V).

<sup>26</sup> These breeders are not commercial firms but individuals who, as a hobby, try to breed new potato varieties. They are also called 'hobby breeders.' Apart from high-tech breeding activities in the laboratories of professional breeders, the hobby breeders play an important role in the highly uncertain and time-consuming process of new potato variety development.

the merchants keep abreast of a range of customer demands concerning properties of potato varieties, expected needs for particular potatoes in the future (e.g., x tons of variety y in year z), and other aspects that are relevant to future transactions, rather than present ones. For instance, a seed potato merchant/breeder explained that *'We listen to the ware potato merchants we do business with, who inform us about the needs of retailers for particular varieties.'*

The vertical relations of ware potato merchants usually involve flows of information and knowledge to regularly evaluate the business contacts and enhance product quality. Moreover, contacts tend to become more intensive as a result of the increased demands from customers for 'teeltregistratie' i.e., to register the way the potatoes are grown (which is much in line with customers' requests for traceability in the UK). Some of the ware potato merchants also exchange ideas with retailers to develop new products and services. This has, for instance, led to the introduction of new potato products/varieties in supermarkets, as well as just-in-time distribution systems.

The potato processors in the Netherlands generally have quite intensive contacts with their suppliers who are either individual growers or ware potato merchants. The exchange of knowledge and information is largely aimed at improving the quality of supplies and logistic processes, both in the short and long term. A manager of a large potato processor explained that *'This happens in the context of a process of mutual learning, which keeps us together.'* In this respect it was pointed out that the quality of the ware potato supply has a tremendous impact on the costs of potato processing, which, in turn, need to be as low as possible to remain competitive. The intensity of knowledge and information exchange with major buyers located in different countries<sup>27</sup> appeared to vary from customer to customer.

#### *Flows of mutual expectations*

The customer and supplier relations of Dutch potato firms are largely based on combinations of oral agreements and formal contracts. As is shown in Figure 5.9, this is true for virtually all supplier relations and most of the customer relations. A very minor part of the transactions with customers is based on highly specific contracts.

An important proportion of the transactions between Dutch potato firms takes place on the basis of oral agreements, often made by telephone, which are later confirmed by a

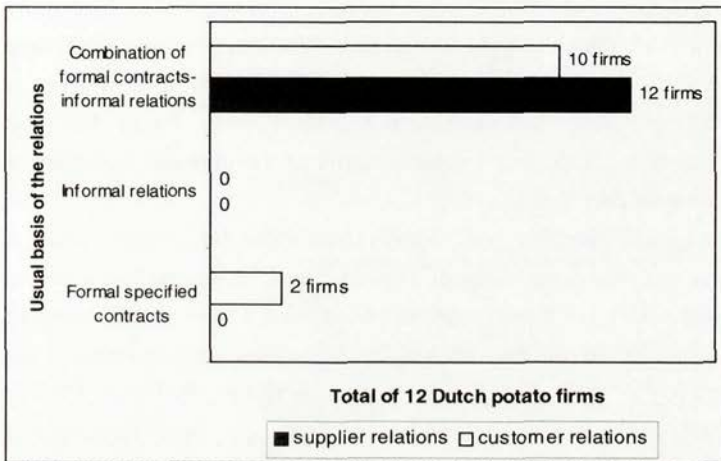
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<sup>27</sup> As was pointed out in Section 5.1.3, about 90% of the total output of the Dutch potato processors is destined for export markets.



formal contract. These contracts are standardized and often added to general conditions of trade, which tend to vary from firm to firm. It was explained that the contracts are often nothing more than a sheet of paper that specifies straightforward transactional aspects such as the amount, quality, variety, and time of delivery. The details about the deliveries are put to paper in order to avoid misunderstandings and to have something to refer to in case of disagreements. In particular, the seed potato merchants consider it important to work with formal contracts in order to keep control over the propagation of their potato varieties (which are protected by breeder's rights).

**Figure 5.9** The basis of customer and supplier relations of leading Dutch potato firms



Source: interview data<sup>28</sup>

However, formal contracts are considered secondary to mutual trust, which appeared to be an important basis for the relations between buyers and suppliers. As a manager put it, *'The contracts are mainly used for bookkeeping purposes.'* Moreover, the general conditions of sale tend to have a ritual function, which was illustrated by a respondent who noted: *'Just recently I had a look at the general conditions of sale that we had attached to our contracts for years ... I discovered some serious flaws that never had been noticed because nobody really had read the conditions.'* The respondents explained that most of their transactions are embedded in long-term relations. In these

<sup>28</sup> The aggregated results of the answers of Dutch managers to question 1 in Section III of the interview protocol (see Appendix V).

long-term relations, reputations have been built up that form a basis of mutual trust. With respect to the relevance of social control, remarks were made that the Dutch potato industry is a small world in which most people know each other. If a firm would do something unacceptable, the whole industry would soon know this. It was stressed that the resulting bad reputation could severely complicate the business activities of the firm involved. Finally, most directors of (in particular the larger) potato firms know each other personally. The threshold to contact each other directly is low. In accordance to this, informal relations between directors generally form an integrated part of the inter-firm relations in the Dutch potato industry.

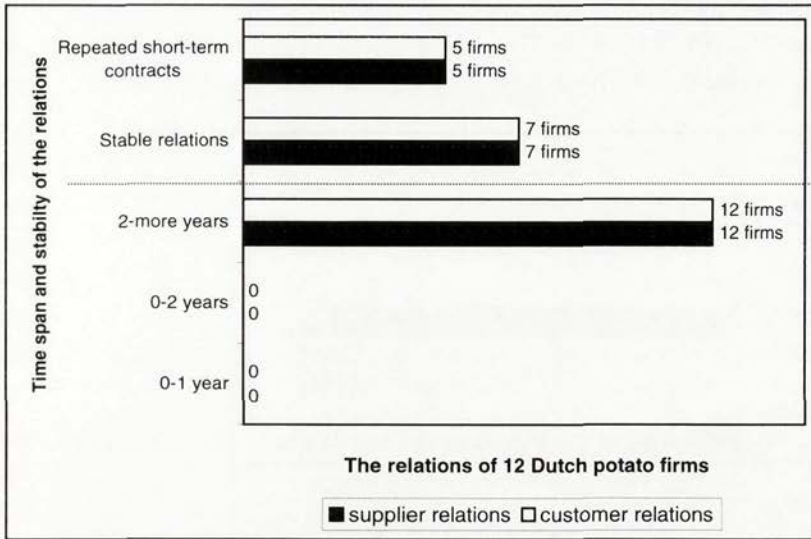
#### *Flows of resources and activity links*

The inter-firm relations of Dutch potato firms generally involve long-term time horizons. As is shown in Figure 5.10, virtually all vertical relations were considered as long-term relations lasting at least two years or longer. It was also found that most vertical relations are stable relations, but a great minority of the long-term relations is based on repeated short-term contracts as well.

The relations between potato merchants and farmers usually last for multiple years, if not decades. Strikingly, no significant differences were found in this respect between marketing co-operatives and private firms that all work with a very stable group of suppliers<sup>29</sup>. At both types of firms, the relations with growers are sometimes even passed on from generation to generation. A seed potato merchant noted that '*Most of our suppliers are with us since the firm was established ... they only leave us in case of conflict and in the rare cases this ever happened we felt it as a big shame.*' The long-term relations are considered functional in the sense that they facilitate the achievement of both process and product quality improvements which are needed to remain competitive. Dutch potato processors generally prefer to rely on long-term commitments with a limited number of seed and ware potato merchants for the greater part of their supplies<sup>30</sup>.

<sup>29</sup> This was noted by Lamont (1992) as well.

<sup>30</sup> In the past decade, some of these relations have evolved into more formal structures such as joint ventures or led to take-overs of potato merchants by potato processors.

**Figure 5.10** The time span and stability of vertical relations in the Dutch potato industry

Source: interview data<sup>31</sup>

In this manner the potato processors seek to secure a stable supply of ware potatoes, which is of vital importance for the continuity (and efficiency) of their production processes. Long-term relations are also present among a limited number of Dutch ware potato merchants and retailers. This is in tune with the policy of the large retailers in the Netherlands which, like their UK counterparts, prefer to work with a limited number of dedicated suppliers for each product group.

In the discussions with the respondents about the duration of their vertical inter-firm relations, the respondents pointed out that they have not very much choice anymore with respect to the selection of buyers and suppliers. Figure 5.11 presents the views of potato firm managers, who indicated that it is almost impossible to find another customer and that the options to switch to another supplier have become quite limited. This is important because the number of firms has decreased considerably in the past decades in the Dutch potato industry<sup>32</sup>. However, some managers also pointed out that switching to another buyer or supplier was neither easy nor desired, because the inter-firm relations

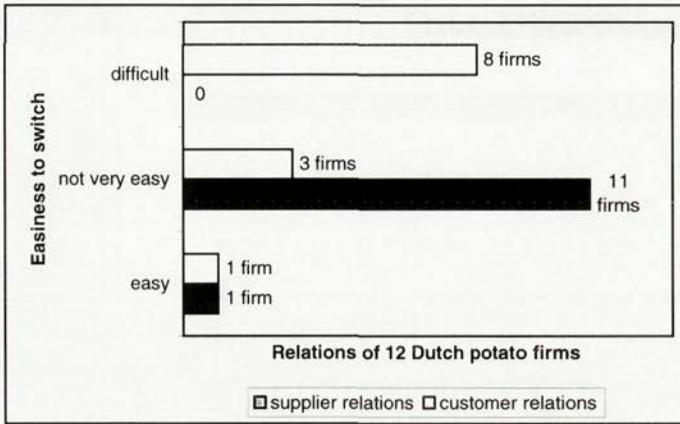
<sup>31</sup> The aggregated results of the answers of Dutch managers to question 3 in Section III of the interview protocol (see Appendix V).

<sup>32</sup> See also Rademakers and McKnight (1998) on the concentration in the Dutch potato industry.



had more or less become 'crystallized' over the many decades (up to more than a century) their firm was in business.

**Figure 5.11** The ease for Dutch potato firms to switch to another customer or supplier



Source: interview data<sup>33</sup>

The relatively large minority of inter-firm relations that are based on recurrent short-term contracts can be explained by the finding that not all respondents regarded long-term contracts as an important basis for long-term relations. A manager expressed the view that *'Long-term contracts are not necessary ... the experience is that firms keep working together anyway.'* The short-term contracts are mainly seen as a way to remain flexible within broader, long-term relations. For instance, potato merchants may need to switch to another potato variety in case demands decrease. This implies the need for a new contract, but not necessarily with another grower.

It must be noted that, in particular, the trade of ware potatoes in the Netherlands is based on a range of different types of contracts for either post- or pre-harvest trade. The notation of the (non-monopolized) Bintje variety at the Rotterdam potato exchange is an important price setting mechanism in the post-harvest market. This is a spot-market that is used by firms to speculate, to sell surpluses or to buy additional supplies. Nevertheless it is important with regard to price setting as just a handful of firms are

<sup>33</sup> The aggregated results of the answers of Dutch managers to question 2 in Section III of the interview protocol (see Appendix V).

actively involved in this ware potato exchange. The exchange price notation of ware potatoes is applied as a reference for the determination of pre- or post-contract prices in direct supply relations of potato merchants (both private and co-operative), potato processors, and retailers.

To reduce the risks that come with the considerable price fluctuations of potatoes, different types of pre-harvest contracts have been developed. The major contract types are based on either spot-market prices (full risk), pool systems<sup>34</sup> (reduced risk) or pre-harvest fixed prices (no risk). In addition, in Amsterdam there is a futures market for potatoes, which, apart from speculation by people from both inside and outside the industry, is used to a certain extent as a mechanism to temper the risks of price fluctuations.

In practice, the principal suppliers of ware potatoes (i.e., the growers) make use of a combination of the available contracting systems to secure a part of their income (which is often required by their banks) and to keep some space to speculate on price fluctuations. However, speculation becomes increasingly rare because of the increased favor of major potato firms to work with pre-harvest contracts. In this manner they moderate the financial risks that come with the vast amounts of potatoes they have to sell or buy. For instance, when potato processors obtain an order from a large customer, they secure most of the needed potato supplies through pre-harvest contracts at a (semi-) fixed price, rather than relying on the spot market<sup>35</sup>.

Risk sharing in vertical relations is not uncommon for Dutch potato firms. In fact, risk sharing in different forms and degrees is practiced by large, small, and medium-sized firms across the entire supply chain. Ware potato merchants and potato processors invest time and financial resources in the joint development of new potato varieties with breeders/seed potato merchants. For instance, some processors and ware potato merchants work together with breeders and/or growers in field trials of 'prototype' varieties. A manager explained, in tune with many of his colleagues, that *'We put a high priority to cooperation with breeders for the development of new potato varieties and we invest much money in it.'* These activities involve joint investments while returns are

<sup>34</sup> Pool systems generally work on the basis of a group of growers who put together (part of) their crop. The total amount of potatoes is then sold (often via a merchant) in batches over a certain time period, which moderates the effects of peaks and dips in the spot-market prices.

<sup>35</sup> Note that potato processors generally need huge amounts of raw materials while they work with small profit margins. Hence, an unanticipated increase of ware potato prices can lead to heavy losses.

far from certain. The outcomes of the tests and trials are quite unpredictable and a long time (up to 15 years) is needed to arrive at commercially useful results<sup>36</sup>.

Risk sharing takes place at the downstream end of the potato supply chain as well. Examples are the Dutch potato processors and ware potato merchants who work together with retailers (and jointly carry the risks) of new product development and introduction for private label products. The joint activities range from the development of new packaging to the introduction of new potato products and varieties. Regarding the numerous (and sometimes very costly) failures reported by potato firm managers, the introduction of new products proves to be a risky matter for all parties involved. Other forms of risk sharing at the downstream end are joint logistic systems used by ware potato merchants and retailers. These systems imply full integration of a part of the product flows of the firms involved. It was explained that the development of such logistic systems requires substantial joint investments, while the risks that come with the operation of the system are carried together. Finally, some of the cooperative relations between Dutch potato firms were found to include risk sharing with regard to price variations in the markets of the buyers. In such occasions a (major) supplier temporarily lowered its prices to support the buyer to withstand the (price) competition resulting from, for instance, aggressive market penetration campaigns of its competitors. A respondent explained the philosophy behind this form of risk sharing, telling that *'If a customer firm has a problem, we regard it as our problem too, so we always look for joint solutions.'* The pragmatic underpinning of this line of thinking is that suppliers of potatoes or potato products secure an important part of their future sales (at better prices) by contributing to the competitive strength of their buyers<sup>37</sup>.

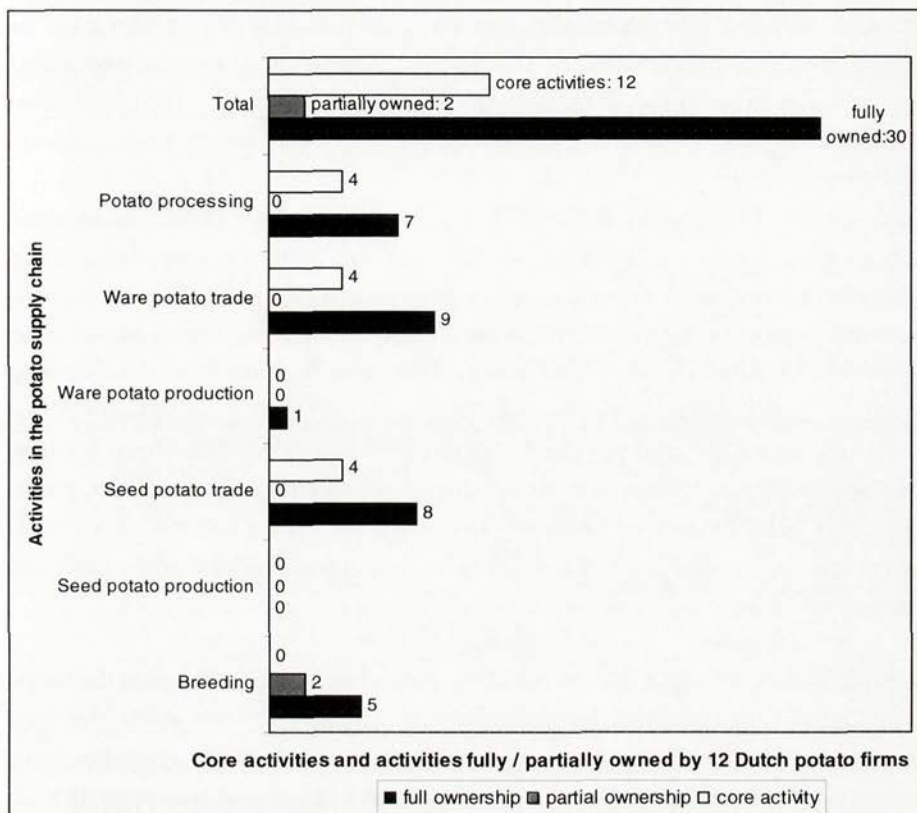
#### *Vertical integration and self-sufficiency*

Figure 5.12 displays the findings about the level of vertical integration among firms in the Dutch potato industry. It is shown that the 12 firms involved in this study are engaged in a total of 30 activities, which indicates that the level of vertical integration in the Dutch potato industry is quite high. This view is further enhanced through the quite

<sup>36</sup> Because of the high uncertainty of the results of potato variety development, firms working at the downstream part of the supply chain tend to keep in touch with multiple breeders. This is done *'To keep them (the breeders) sharp'* and because it is unpredictable which firm would come with a new, very useful variety.

<sup>37</sup> Note that this thinking also strongly reflects the long-term horizon Dutch potato firms tend to work with in their vertical relations.



**Figure 5.12** Vertical integration and core activities of Dutch potato firms

Source: interview data<sup>38</sup>

equal distribution of the total number of activities per stage in the Dutch potato supply chain (except for potato growing and, to a lesser extent, breeding)<sup>39</sup>.

<sup>38</sup> The aggregated results of the answers of the Dutch managers to the questions in Section I of the interview protocol (see Appendix V and also Chapter 4, Section 4.2.2).

<sup>39</sup> The almost complete absence of firms involved in seed or ware potato growing can be explained by the fact that most of the seed and ware potatoes grown in the Netherlands are traded through farmers' co-operatives. These co-operatives can be regarded as a form of forward integration by farmers. However, individual farmers have not been involved in the field study that forms the basis of this analysis. The co-operatives (seed and ware potato merchants) involved in this study have been treated as firms that obtain their supplies via contracts with growers.

It was found that although all major potato processors are involved in ware potato trade (though mainly buying), the seed potato merchants have integrated backwards into breeding, and most ware potato merchants are also involved in seed potato trade. In general, the firms that dominate the Dutch potato industry (in terms of market share) own activities in one or two stages of the Dutch potato supply chain. Apart from these firms, there are a few companies that own activities in all stages (except potato growing) of the supply chain.

After a closer examination, the level of vertical integration of Dutch potato firms appears to vary considerable. On the one hand, the leading firms in every stage of the supply chain are focused on just one or two activities and prefer inter-firm cooperation to vertical integration by ownership. On the other hand, most firms cover two or more stages of the potato supply chain. For instance, one firm constitutes an entirely integrated supply system in its own right, ranging from breeding activities to potato processing but not including potato growing activities. A couple of other firms combine seed and ware potato trade with minor activities in potato processing. Moreover, potato processors incline to integrate backwards into ware potato trading activities. In contrast, other firms tend to return to their core activities such as breeding/seed potato trade and ware potato trade.

Regardless of the various levels of vertical integration that have been found in the Dutch potato industry, most firms are just moderately self-sufficient. In other words, the firms owning activities in multiple stages of the potato supply chain remain largely dependent of supplies from other, autonomous organizations. For instance, it was noted that all major potato processors are involved in ware potato trade. Nevertheless, autonomous ware potato merchants, though few in number at present, remain an important source of potato supplies for the processors.

The combination of high levels of vertical integration and moderate degrees of self-sufficiency can be linked to the motivations of firms for either forward or backward integration. In general, potato firms seek to take advantage of market opportunities rather than secure their supplies through backward integration. For instance, some seed and ware potato merchants and also farmers moved into potato processing in the past decades to take advantage of the growth in the markets for potato products. Most of these initiatives failed, were sold or remained a secondary activity of the firms involved. Few developed into large, autonomous firms or became business units of holding companies. Other examples are the major Dutch seed potato merchants that have

integrated backwards into breeding. This can be linked, at least in part, to the strategic importance of having breeders' rights over monopolized varieties (see Section 5.1.3) in order to get access to major buyers. However, none of these seed potato merchants are self-sufficient. They draw from, or work together with autonomous breeders to gain access to new potato varieties.

### Overview

Table 5.6 summarizes the findings about the attributes of vertical inter-firm cooperation in the Dutch potato industry. It was found that the flows of knowledge and information in the vertical inter-firm relations of potato firms are quite extensive and go beyond discrete transactions. The relations are for the most part based on mutual trust which, in turn, is based on reputation, social control, and personal contacts. Formal contracts are widely used as a practical tool for the coordination and control of transactions. They are considered as a necessity for book keeping purposes, rather than a major basis of trust. Moreover, the transactions between Dutch potato firms are generally embedded in ongoing relations with long time horizons. In addition, both pragmatic and more durable forms of risk sharing exist between buyers and suppliers across the Dutch potato supply chain.

**Table 5.6** Attributes of vertical inter-firm cooperation in the Dutch potato industry

Key attributes of cooperative customer-supplier relations		Relevance
<i>Flows of Information</i>	• Surpassing transactional information	+
	• Exchange of knowledge	+
<i>Flows of mutual expectations</i>	• Relations largely based on mutual trust	+
<i>Flows of resources and activity links</i>	• Long-term time horizon	+
	• Risk sharing	+
<i>Integration of activities</i>	• Degree of vertical integration	+ / —
	• Degree of self-sufficiency	—

Source: see text



With regard to vertical integration, most firms in the industry are focused on one or two activities in the potato supply chain. A minority of firms (in terms of both market share and number) is fully integrated. The level of self-sufficiency of the firms in the Dutch potato industry tends to be low. In summary, the pattern of the attributes of vertical inter-firm cooperation in the Dutch potato industry reflects a strong dominance of cooperative relations.

### 5.3.2 Horizontal inter-firm relations in the Dutch potato industry

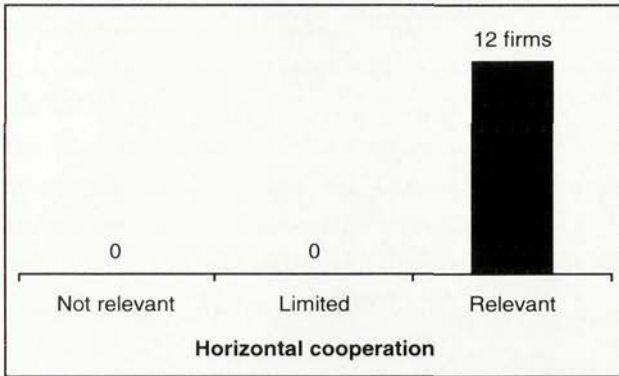
Cooperation between competing firms is remarkably well developed in the Dutch potato industry. Figure 5.13 shows that all respondents indicated their involvement in some form of horizontal cooperation. The stance of potato firm managers with regard to this issue is well reflected in their remarks that '*In this industry competitors see each other also as colleagues.*' Nevertheless, the respondents were quick to emphasize that the competition among them is very tough as well, pointing to the considerable shakeouts and other structural shifts that the industry has witnessed since the late 1980s. In addition, it was stressed that the Dutch anti-trust legislation had been sharpened considerably in the mid-1990s.

Information exchange between competitors in the Dutch potato industry is quite intensive. Virtually all firms exchange information with their competitors about a wide range of (non-commercial) subjects such as problems in export markets, warnings about bad debtors, developments of the industry and governmental policies. In a similar fashion, particularly Dutch seed potato firms and potato processors take advantage of the exchange of knowledge. This mainly concerns technical issues such as measures against plant disease and measures for environmentally sound production.

More intensive forms of knowledge and information exchange occur in the many ad-hoc or more structural cooperative arrangements between competing firms in the Dutch potato industry. Of the 12 firms in the field study, four are engaged in joint ventures with competitors. These joint ventures concern operations in foreign markets, breeding activities, and the bundling of ware potato sales for particular varieties. Moreover, 8 out of 12 firms undertake joint research and development activities in the field of marketing, plant disease control, logistics, quality, and environmentally sound production. However, it must be noted that the joint research and development activities of Dutch potato firms represent a minor part of the total research efforts in the industry. In

addition, it was indicated that by far the most research is non- or pre-commercial in nature.

**Figure 5.13:** The perceptions of managers of 12 Dutch potato firms about the relevance of horizontal cooperation



Source: interview data<sup>40</sup>

For instance, respondents explained that *'We conduct research with our competitors about how to fight plant disease because that is in everybody's interest and because there is no danger that we loose competitive strength.'*

Mutual shareholdings are not very common in the Dutch potato industry. Just one firm reported to be involved in such a relation. In addition, some arrangements exist that indirectly link together a number of major Dutch potato firms. The firms involved are partially owned by a large holding-like co-operative and are active in all stages of the potato supply chain. Despite this ownership arrangement, the firms largely operate independently from each other.

Equipment sharing can be considered a quite common form of horizontal cooperation among firms in the Dutch potato industry (7 of the selection of 12 firms). The sharing of equipment is done both ad-hoc and in more structured ways. For instance, ad-hoc arrangements are set up when a firm runs into capacity problems because of sudden malfunction of machinery, accidents, unanticipated maintenance, or peaks in orders from large customers. In such cases, as a respondent explained, *'We call one of our colleagues with the question if we can arrange something and we find a joint solution in*

<sup>40</sup> The aggregated results of the answers of the Dutch managers to question 1 in Section IV of the interview protocol (see Appendix V).

*nine of the ten cases.*' In a more structural fashion, potato processors make use of the possibility to hire capacity from each other via 'horizontal contracts.' Moreover, seed and ware potato merchants frequently share transportation equipment/capacity to enhance the efficiency of their logistic processes.

Most of the joint activities of the Dutch potato firms are initiated and managed on the basis of informal relations between the directors of the firms. Personal reputation is an important basis of trust in horizontal cooperation. Moreover, there is a clear readiness to work with each other, and it is a generally accepted practice to take into account each other's interests. Formal contracts are used as well, for instance to make explicit the agreements made with regard to horizontal arrangements such as joint ventures and hiring production capacity. However, these explicit agreements can be considered less important as a basis of trust in the horizontal inter-firm relations of Dutch potato firms.

**Table 5.7** Attributes of horizontal inter-firm cooperation in the Dutch potato industry

Key attributes of horizontal cooperation		Relevance
<i>Flows of Information</i>	• Information exchange	+
	• Knowledge sharing	+
<i>Flows of expectations</i>	• Implicit agreements	+
	• Explicit agreements	+ / —
<i>Flows of resources</i>	• Joint investments	+
	• Mutual shareholdings	—
	• Equipment sharing	+

Source: see text

Table 5.7 provides an overview of the attributes of horizontal inter-firm cooperation in the Dutch potato industry. The general view that emerged is that horizontal cooperation in the Dutch potato industry is well developed, tends to be pragmatic in nature, is often aimed to enhance efficiency or share costs, and is limited to non- or pre-commercial activities.



### 5.3.3 The relative importance of business associations in the Dutch potato industry

Similar to the discussion about UK business associations, the relative importance of their Dutch counterparts will be done on the basis of the possible functions identified in Chapter 3. The sequence followed here is also determined by the degree of relevance of these functions to the trade associations.

#### *Facilitation of horizontal cohesion*

Trade associations in the Dutch potato industry function in particular as formal meeting points where directors and/or senior managers of competing firms discuss developments in the industry. Members have meetings at their association several times a year. In these meetings, member firms discuss common problems and the measures that need to be taken to resolve them. Issues include, for instance, pressures from society concerning environmentally sound production, technical developments, industry restructuring, and governmental policies.

One of the results of joint actions via trade associations to solve a common problem led to the abandoning of the quasi-governmental industry association *Productschap Aardappelen* in the second half of the 1990s. Many firms regarded this organization as too expensive and also as an anachronism. This organization was replaced by another industry association, the *Commissie Aardappelen (CA)*, with considerably less manpower, authority, and functions than its predecessor. The major tasks of this organization have become limited to gathering and distributing general information about the industry and managing communication between the government and the industry. The CA also provides a statutory basis for common rules agreed upon by representatives of trade associations. The organization, however, has no statutory powers itself, but functions as advisor to the general industry board '*Productschap Akkerbouw*' that does have statutory powers.

Apart from facilitating joint action, the 'platform' function of the Dutch business associations strongly promotes socialization among its members. As one chairman put it: '*The gatherings of the various commissions in these associations are social events as well.*' Although firms sometimes severely compete with each other, their managing directors generally view each other as colleagues. On the basis of this attitude, managers of competing firms communicate about technical and other developments in the industry, and also bundle their firms' resources in pre- or non-competitive joint

activities. In this manner, the overall efficiency of the industry is improved, which strengthens the position of Dutch potato firms in export markets.

### *Development of general rules*

Another well-developed function of the Dutch trade associations is the provision of common rules/codes of conduct. This includes general conditions of trade, quality norms and specifications, and covenants (agreements with the state that substitute formal law). As was indicated earlier, the industry association is used as a vehicle to provide self-imposed rules and regulations with a statutory basis. This statutory basis provides the possibility to undertake measures in the case of free-rider behavior through firms that try to avoid complying with the common rules. The strength and impact of these common rules vary to some extent. For instance, although the trade associations provide general conditions of trade, these are not seen as a very important basis for the exchanges between firms. The inspection protocols and quality specifications that apply to the industry are considered more important. They are monitored by independent officials from the associations and provide exchange parties certainty about the reliability and quality of the products. The ability to provide such certainties are an important prerequisite for the development of a reliable supply system for both domestic and export markets. The covenants between the government and the industry are very relevant as well, because they substitute laws and regulations that otherwise would be imposed on the industry. Clearly, the firms that make up the Dutch potato industry value self-administration and realize this through joint actions via business associations.

### *Arbitration*

Arbitration services appeared to be well-developed functions of the Dutch trade associations. The arbitration services are linked to the general conditions of trade and are called for several times a year. The commission of arbiters consists of members of the association who are elected for this function. The judgement of this commission is binding for the firms that appeal to arbitration to solve a conflict. Most potato firm managers prefer that people 'of their own' are the arbiters because, as one manager said, '*They know what they are talking about.*' In addition, it was pointed out that in case of conflicts the parties do not need to go to court, which would be a costly affair.



*Promotion of interests*

Trade associations are also used to gain a critical mass for the promotion of common interests. Interests can be at stake because of unfavorable governmental policies on local, national, or European level and actions of pressure groups. Key issues are, for instance, environmentally sound production, export policies, plant diseases, and market regimes. The promotion of interests is done through lobbying (particularly in 'Brussels'), but, more importantly, also through active participation in the development of new policies and regulations. Most trade associations have long-term and well-cultivated informal relations with relevant Ministries. Some relations can be traced back to the first decades after W.W.II, when a secure supply of food at low prices was an important state objective. This objective was particularly relevant for the potato industry, because potatoes constituted a major part of the daily nutrition of the Dutch population. However, instead of issuing regulations, the attainment of this state objective was largely left to business associations in the potato industry. One chairman phrased the past situation as follows: *'In that period the most important activity of our association was to ensure that the government did not intervene in the potato prices and that enough potatoes were left for the Dutch market.'*

*Dissemination of knowledge and information*

All Dutch trade associations are involved in the dissemination of information and knowledge. The information is mostly general in nature and concerned with statistics about a range of subjects, governmental policies, research outcomes, governance issues, and market trends. The activities of the industry association in this respect are more confined to the provision of general statistics. Both the trade and industry associations function as a collective memory for the industry, as they keep a record of all the information they gather and distribute.

*Coordination in case of industry-wide crisis*

In the past decade, the Dutch potato industry has experienced a number of crisis-like events including a highly harmful publicity campaign by pressure groups concerning the abundant use of pesticides in the industry. The outbreak of 'brown rot' caused another crisis for the industry. This highly contagious plant disease meant a very serious threat for the seed and ware potato exports, which traditionally account for a vast amount of the total production of the Dutch industry. In such situations, the Dutch business associations usually play a coordinating role with regard to the communication involved



and actions to be taken. For instance, based on previous experiences, the industry association has developed 'screenplays' to cope with similar crises in the future. As a chairman pointed out, members are quick to telephone their trade association with the question 'What are we going to do?' if problems occur that affect the entire (or a part of the) industry. Depending on the size and seriousness of the problem, actions are undertaken, either or not in cooperation with other associations, and sometimes government agencies, to find solutions to temper the negative influences of the crisis. In this respect it was remarked that chairmen/secretaries of trade associations, rather than managers of individual firms, know how to find their way in governmental circles.

#### *Initiation and coordination of joint activities*

Both trade and industry associations are involved in the initiation of joint research and promotion activities. For instance, they gain subsidies for research and other programs aimed at industry development and collect funds for collective industry promotion. The trade associations also coordinate joint, non-commercial or pre-competitive (research) projects. However, the respondents considered neither of these joint activities very substantial in comparison with their individual research and promotion efforts. It was pointed out that joint promotion was done on quite a large scale in the past. However, because firms grew larger and potato processing, brands, and monopolized varieties gained importance, the need for this type of joint action has decreased considerably.

#### *Facilitation of vertical cohesion*

The facilitation of cohesion between firms across the supply chain was regarded not relevant for the Dutch trade associations. A similar view was expressed with regard to the industry association, which is considered as 'an association of associations' rather than an organization that acts as a liaison for firms across the industry. Comments made by the respondents indicated that they consider business associations quite irrelevant when it comes to the establishment, development, and maintenance of inter-firm relations throughout the supply chain. Moreover, rather than cohesion, some tension was noted between the associations for ware potato trade and potato processing with regard to views about the future development of the industry.

The results of the discussion about the functions of business associations in the Dutch potato industry are summarized in Tables 5.8 and 5.9. The histograms that comprise part of the database used for the above analysis can be found in Appendix X. In short, the membership base of trade associations in the Dutch potato industry is both voluntary

and inclusive. The trade associations have no statutory powers, but nevertheless have the ability to sanction common rules by making use of the industry association, which, in turn, is a sub-division of a quasi-governmental body. The industry association of the Dutch potato industry has a compulsory membership base. The range of functions performed by the trade associations is wide. The horizontal platform function and ways of self-administration can be considered most important. In contrast, the industry association performs a relatively limited range of activities.

**Table 5.8:** Functions of Dutch trade associations

<b>Relevance</b>	<b>Functions</b>
Strong	<ul style="list-style-type: none"> <li>• Facilitation of horizontal cohesion</li> <li>• Development of general rules</li> <li>• Arbitration</li> <li>• Promotion of interests</li> <li>• Dissemination of knowledge and information</li> <li>• Coordination in case of industry-wide crises</li> </ul>
Moderate	<ul style="list-style-type: none"> <li>• Initiation and coordination of joint activities</li> </ul>
Weak	<ul style="list-style-type: none"> <li>• Facilitation of vertical cohesion</li> </ul>

Source: see text

**Table 5.9** Functions of the Dutch industry association

<b>Relevance</b>	<b>Functions</b>
<i>Strong</i>	<ul style="list-style-type: none"> <li>• Not relevant</li> </ul>
<i>Moderate</i>	<ul style="list-style-type: none"> <li>• Development of common rules</li> <li>• Dissemination of knowledge and information</li> </ul>
<i>Weak</i>	<ul style="list-style-type: none"> <li>• Initiation and coordination of joint activities</li> <li>• Promotion of interests</li> <li>• Coordination in case of industry-wide crises</li> </ul>
<i>Not relevant</i>	<ul style="list-style-type: none"> <li>• Arbitration</li> <li>• Facilitation of horizontal cohesion</li> <li>• Facilitation of vertical cohesion</li> </ul>

Source: see text

Table 5.10 presents an overview of the indicators for the relative importance of business associations in the Dutch potato industry, which have been discussed above.

**Table 5.10** The relative importance of business associations in the Dutch potato industry

	<b>Trade associations</b>	<b>Industry association</b>
<b>Membership base</b>	Inclusive (voluntary)	Inclusive (compulsory)
<b>Statutory powers</b>	Indirect	Indirect
<b>Range of functions</b>	Wide	Limited

Source: see text

#### 5.4 Conclusions

The results of the field study show that supplier relations in the UK potato industry tend to be spot-market in nature. Both the degree of vertical integration and self-sufficiency of UK potato firms are high. Horizontal cooperation appeared largely limited to information exchange. The importance of business associations as forms of inter-firm cooperation in the UK potato industry is not very high. Most trade associations have a fragmented membership base and in particular have developed as lobby organizations and information brokers. The industry association was found to be quite active and also firmly established on the basis of statutory powers and compulsory membership.

The field study in the Dutch potato industry has revealed the prevalence of cooperative vertical inter-firm relations. The degree of vertical integration among Dutch potato firms appeared to vary considerably, while the degree of self-sufficiency turned out to be low. Horizontal cooperation is a strongly developed feature among firms in the Dutch potato industry. Virtually all firms are involved in some structural or more ad-hoc forms of cooperation with competitors. Business associations in the Dutch potato industry are not very numerous and enjoy almost inclusive membership. The Dutch trade associations particularly function as platforms for discussions about industry developments. Moreover, these organizations strongly facilitate socialization among their members. In contrast, the role of the industry association appeared to be very modest.



In sum, the descriptions made on the basis of the field study in the UK and Dutch potato industries have revealed considerable differences in both the degree and nature of inter-firm cooperation in the UK and Dutch potato industry. In the next chapter, the patterns of inter-firm cooperation will be compared and contrasted with each other and linked to the influence of nationally distinct social institutions.



### Part III: *Analysis and conclusions*





## Chapter Six

### COMPARISON AND DISCUSSION OF THE RESULTS FROM THE FIELD STUDY

*This chapter comprises a cross-national comparison of the findings from the field study on the nature and degree of inter-firm cooperation in the UK and Dutch potato industries. The contrasts and similarities identified are placed against the background of nationally distinct social institutions. For this purpose, detailed descriptions are made for each country about the nature of state involvement in the industry, the financial system, the legal system, and the relative legitimacy of individualistic vs. collectivistic behavior. The resulting insights about the patterns of inter-firm cooperation in different national contexts are related to the propositions formulated in Chapter 3. The outcomes provide empirically supported insights into the combined influence of a range of key social institutions on the development of cooperative inter-firm relations.*

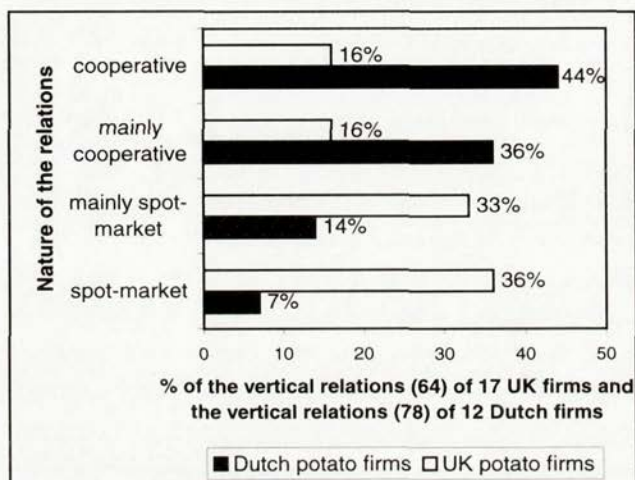
#### 6.1 Comparison of the nature and degree of inter-firm cooperation in the UK and Dutch potato industries

In the following section the nature and degree of vertical and horizontal inter-firm cooperation in the UK and Dutch potato industries are compared and contrasted. The bilateral forms of vertical inter-firm cooperation are dealt with first, followed by a comparison of the findings about horizontal business-to-business relations. Finally, the relative importance of business associations in the potato industries of both countries is addressed.

### 6.1.1 Comparison of the vertical inter-firm relations

The patterns of vertical inter-firm organization found in the UK differ in significantly from the findings in the Dutch potato industry. The spot-market nature of inter-firm relations in the UK contrasts sharply with the prevalence of cooperative relations among Dutch firms. This contrast is shown in Figure 6.1, in which the views are compared of UK and Dutch potato firm managers with respect to the nature of their vertical inter-firm relations.

**Figure 6.1** Cooperative vs. spot-market relations in the UK and Dutch potato industry



Source: Figures 5.2 and 5.8 in Chapter 5

A closer comparative analysis of the attributes of inter-firm cooperation in the UK and Dutch potato industries will be made in the sub-sections below. This will reveal more details about the contrasts between the way UK and Dutch firms coordinate and control their vertical relations.

#### *Flows of information*

It was found that the exchange of knowledge and information in the vertical relations of Dutch firms tends to be quite extensive and usually exceeds the necessary communication required for discrete transactions. In the UK, on the contrary, flows of information are generally limited to discrete transactions. Exchanging knowledge



between buyers and suppliers is rare. Flows of knowledge tend to be one-way directed, contract-based, and generally run from relatively powerful buyers to their suppliers.

#### *Flows of mutual expectations*

The Dutch potato firms, to a great extent, rely on mutual trust based on reputation, social control, and personal contacts. Formal contracts are widely used, though in combination with oral agreements. The contracts tend to be limited to straightforward transactional data such as prices, qualities, and quantities and are largely seen as an additional basis of trust. They are largely used to avoid misunderstandings among the exchange parties, to secure breeder's rights (if relevant), and to have tangible proof in case of disagreements that call for arbitration, negotiations or, in very rare cases, legal proceedings. Similarly, the transactions between most potato firms in the UK are based on combinations of formal contracts and oral agreements, while having a good reputation is also considered highly important. In contrast, social control or personal relations are not relevant as a basis of trust in vertical inter-firm relations of UK potato firms. Moreover, the large potato traders, processors, and retailers that dominate the industry tend to rely on highly specified contracts.

#### *Flows of resources and activity links*

The time horizons of the vertical inter-firm relations in the UK and Dutch potato industries differ considerably. Most of the transactions between Dutch potato firms are embedded in ongoing relations with long time horizons. This is not the case with UK firms, which generally work with recurrent short-term contracts that involve short-term time horizons. Nevertheless, the repeated contracts used by UK firms constitute relations that cover multiple years.

In tune with the long-term view that is common among the Dutch potato firms, risk sharing between buyers and suppliers is not unusual. Examples include joint investments in the development and operation of logistic systems, joint investments in breeding activities, and joint actions of buyers and suppliers to beat the competition. In contrast, risk sharing between buyers and suppliers in the UK is virtually absent.

From the field study it is also apparent that the degree of vertical integration among the firms dominating the UK potato industry is higher than in the Netherlands. The Dutch potato industry comprises a rather diverse structure of a few fully integrated firms and a majority of organizations that comprise two activities across the potato supply chain. Moreover, vertical integration by firms in the UK appears mainly supply-driven, while

the motivations of their Dutch counterparts are particularly driven by market opportunities. Accordingly, the degree of self-sufficiency of Dutch potato firms tends to be low, while the integrated firms that dominate the UK potato industry are without exception highly self-sufficient.

Table 6.1 provides a comparative overview of the differences in the attributes of vertical cooperative relations in the UK and Dutch potato industries. As can be seen, the patterns that reflect the relevance of the attributes of inter-firm cooperation are as good as opposite to each other.

**Table 6.1** Vertical inter-firm relations in the UK and Dutch potato industries

Attributes of vertical cooperative relations		UK	NL
<i>Flows of Information</i>	• Surpassing transactional information	—	+
	• Exchange of knowledge	—	+
<i>Flows of mutual expectations</i>	• Relations largely based on mutual trust	—	+
<i>Flows of resources and activity links</i>	• Long-term time horizon	—	+
	• Risk sharing	—	+
<i>Integration of activities</i>	• Degree of vertical integration	+	+ / —
	• Degree of self-sufficiency	+	—

Source: see text

### 6.1.2 Comparison of the horizontal inter-firm relations

The patterns of the attributes of horizontal cooperation between UK and Dutch potato firms reflect some similarities but contrast even more. Table 6.2 indicates that horizontal inter-firm cooperation is much stronger developed in the Dutch potato industry than in the UK.

**Table 6.2** Horizontal inter-firm cooperation in the UK and Dutch potato industries

Attributes of horizontal co-operation		UK	NL
<i>Flows of Information</i>	• Information exchange	+	+
	• Knowledge sharing	—	+
<i>Flows of mutual expectations</i>	• Implicit agreements	—	+
	• Explicit agreements	+ / —	+ / —
<i>Flows of resources and activity links</i>	• Joint investments	+ / —	+
	• Mutual shareholdings	—	—
	• Equipment sharing	—	+

Source: see text

#### *Flows of information*

Information exchange between competitors occurs on a wide scale in both the UK and Dutch potato industries. Managers of firms talk with each other about a range of different but non-commercial subjects including, and in particular, governmental policies, developments in overseas markets, and technical aspects of potato growing. Contrary to the UK, however, it is far from unusual for Dutch firms to exchange knowledge with each other about such issues as, for instance, technology for environmentally sound production and ways to fight plant disease. In addition, knowledge exchange is part of the structural and ad-hoc cooperative arrangements that are common practice among competing firms in the Dutch potato industry.

#### *Flows of mutual expectations*

Trust in the joint activities of Dutch potato firms is in part based on the personal reputation of the managing directors, who generally maintain informal relations with each other. These relations are based on mutual respect and facilitate cooperation based on implicit agreements. In the UK implicit agreements based on informal relations between directors of competing firms are considered irrelevant. Both in the UK and the Netherlands, contracts are used as a basis for formal forms of cooperation such as joint ventures. However, in the Dutch potato industry these explicit agreements are considered of secondary importance in comparison with the implicit agreements based on the personal relations between the directors.



*Flows of resources and activity links*

Joint activities between competing firms in the UK are largely restricted to a limited number of joint ventures in breeding activities. Moreover, forms of horizontal cooperation based on informal relations between the directors of UK potato firms are very rare, if not absent. In contrast, joint activities among competing firms are common in the Dutch potato industry and involve, for instance, the joint use of logistic systems, joint research, and hiring production capacity from each other.

Marketing co-operatives as forms of horizontal cooperation between UK potato growers turned out to be relatively scarce, certainly if compared to the Netherlands where both the seed and ware potato trade is dominated by organizations of this type. Mutual shareholdings appeared relevant to neither UK nor Dutch potato firms.

In conclusion, firms in the Dutch potato industry generally see competition and cooperation as two sides of the same coin in gaining competitive strength. In accordance with this, a range of horizontal cooperative inter-firm arrangements has been developed. These arrangements are, for an important part, based on informal peer-group relations between the directors. In contrast, horizontal cooperation among UK potato firms is largely limited to information exchange, while the relations between competitors are dominantly adverse in nature.

**6.1.3 Comparison of the relative importance of business associations**

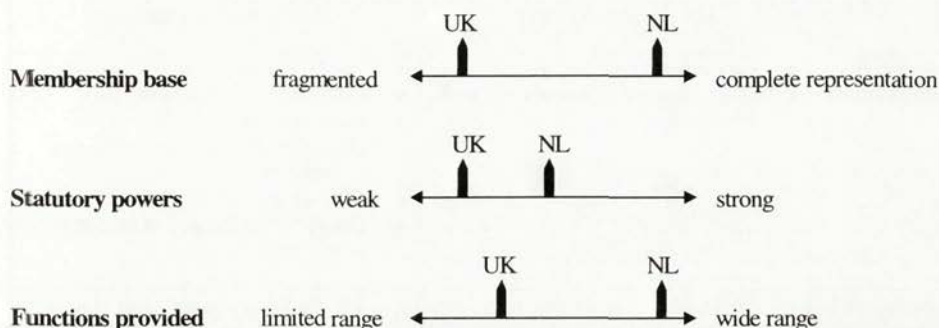
The relative importance of both trade- and industry associations differs greatly between the Dutch and UK potato industries. The membership base, statutory powers, and range of functions of the business associations vary substantially between the two countries.

*Trade associations*

As is reflected by Figure 6.2, the membership base of the UK trade associations is quite fragmented while the Dutch organizations enjoy virtually inclusive membership. Moreover, unlike most Dutch trade associations, which can make use of statutory powers via indirect arrangements with statutory organizations, the trade associations in the UK have no statutory means to enforce common rules for their members. In addition, with regard to the range of functions performed by the trade associations in both countries, the Dutch organizations have a considerably broader repertoire than their

counterparts in the UK. The key functions of the associations in both countries differ considerably as well (see Table 6.3).

**Figure 6.2:** The relative importance of trade associations in the UK and Dutch potato industries



Source: see text

Trade associations in the UK potato industry are particularly active as lobby organizations. In this role they aim to influence both national and EU policies in favor of their members. Because many regional and product-specific interests appear to exist in the UK potato industry, many trade associations have a narrow focus. The promotion of interests is also a well-developed function of the Dutch organizations, but the emphasis is less on lobbying and more on consultative relations with the government. As is shown in Table 6.3, the dissemination of knowledge and information is an important function for both UK and Dutch trade associations as well. Most associations inform their members on a regular basis about a broad range of subjects considered relevant to them.

In sharp contrast to the UK, Dutch associations function as vehicles for the enhancement of horizontal cohesion. This cohesion is largely based on personal meetings between the managers of competing firms in the industry. Moreover, some of the Dutch associations intentionally facilitate socialization among their members to promote cohesion. In the UK, the facilitation of horizontal cohesion by trade associations is weakly developed, if not absent. Moreover, most associations are highly specialized, which implies the danger of clique formation. The low relevance of the facilitation of horizontal cohesion by UK trade associations in comparison with the Dutch associations is reflected in their fragmented

membership base, a lower frequency of meetings among members, and less involvement of managing directors as representation is often delegated to senior management.

**Table 6.3** Functions of UK and Dutch trade associations in the potato industry

	UK potato industry	Dutch potato industry
<b>Strongly developed</b>	<ul style="list-style-type: none"> <li>• Promotion of interests (lobbying)</li> <li>• Dissemination of knowledge and information</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitation of horizontal cohesion</li> <li>• Development of general rules</li> <li>• Promotion of interests</li> <li>• Dissemination of knowledge and information</li> <li>• Arbitration</li> <li>• Coordination in case of industry-wide crises</li> </ul>
<b>Moderately developed</b>	<ul style="list-style-type: none"> <li>• Facilitation of horizontal cohesion</li> <li>• Facilitation of vertical cohesion</li> <li>• Development of common rules</li> <li>• Arbitration in case of conflicts</li> </ul>	<ul style="list-style-type: none"> <li>• Initiation and coordination of joint activities</li> </ul>
<b>Weakly developed</b>	<ul style="list-style-type: none"> <li>• Coordination in case of industry-wide crises</li> <li>• Initiation and coordination of joint activities</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitation of vertical cohesion</li> </ul>

Source: see text

The functions of trade associations that are strongly developed in the Dutch potato industry but moderately or weakly developed in the UK include the development of common rules, arbitration services, and coordination in case of industry-wide crisis. In the UK, the development of common rules tends to be limited to 'club rules' and general conditions of sale. The common rules of Dutch trade associations particularly concern quality issues that support the building and maintenance of a good reputation of Dutch potato firms in export markets. In addition, the Dutch trade associations play an important intermediary role in the development of covenants, which reduce the need of the government to impose regulations to the industry. The Dutch business associations, which have a broad membership base and usually have a mandate to speak on behalf of their members, play a key function in the negotiation processes that precede such agreements.

Both UK and Dutch trade associations provide arbitration services to their members. However, this function appeared more strongly developed among the Dutch associations.



Their arbitration services are broadly accepted and considered legally sound. In the UK, arbitration is directly linked with general conditions of sale. Their use is restricted to the members of the business association that developed these conditions of sale. Hence, the legal strength of these arbitration services with respect to non-members is considered to be questionable.

The initiation and coordination of actions in case of industry-wide crises is a function that is weakly developed among trade associations in the UK but very relevant to their Dutch counterparts. In the UK, the fighting of crises is generally seen as a task for the government. In the Dutch potato industry (where industry-wide crises somehow seem to occur more regularly than in the UK) most trade associations assume an active coordinating role. Actions by government agencies are considered important as well, but these agencies are supposed to operate in close cooperation with the trade associations.

The initiation of joint activities, such as joint research and promotion, has not developed into a relevant function of trade associations in the UK. The general view is that risks are to be taken by individual firms. In contrast, most of the Dutch associations are involved in the initiation and administration of pre-competitive and non-commercial research, as well as in projects for industry development funded by the members and governmental subsidies. Most research and promotional efforts by Dutch potato firms, however, are done individually.

Finally, the facilitation of vertical cohesion among firms across the supply chain is not a very strongly developed function of UK trade associations and is even more weakly developed among their Dutch counterparts. The contrasts between the UK and Dutch trade associations in this respect can be linked to differences in the degree of vertical integration of their members, which tend to be higher in the UK.

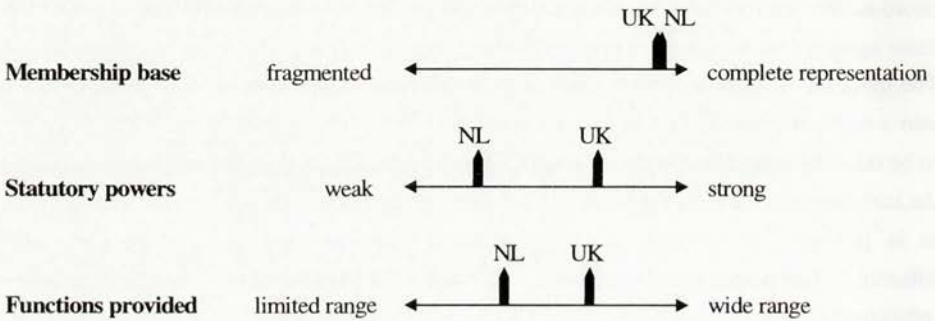
### *Industry associations*

The relative importance of industry associations, as perceived by managers of potato firms, differs substantially between the UK and Dutch potato industries as well. This is presented in Figure 6.3, which provides a comparative view of the membership base, statutory powers, and functions of these organizations.

Both the UK and Dutch industry associations are inclusive organizations, because membership is compulsory for the potato firms across the entire industry. An important difference in this respect is that, in the UK, the representatives with a seat in these associations are either managers of firms or officials from trade associations. The Dutch association merely bundles representatives of trade- and workers' associations. Another

difference is that the statutory powers of the Dutch association are much weaker than its counterpart in the UK potato industry. This is because the Dutch association has no statutory powers, although it provides advice and proposals to a general statutory body of which it is a sub-division. In contrast, the association in the UK is an autonomous organization with a mandate of the British government to promote the development of the domestic potato industry. Moreover, the range of functions provided by the Dutch industry association is very limited in comparison with its counterpart in the UK (see Table 6.4).

**Figure 6.3** The relative importance of the industry associations in the UK and Dutch potato industries



Source: see text

One of the major functions of the UK industry association is the dissemination of knowledge and information to its levy payers which is done through a range of projects, events, and media. The activities of the Dutch association, in this respect, are largely limited to putting together annual reports with statistics about the industry.

Another dissimilarity between both organizations concerns the initiation and coordination of joint activities in the industry. The UK industry association actively initiates and coordinates promotion and research activities, which are partially state- and levy-funded and aimed at the further development of the British potato industry. Similar activities are carried out by the Dutch industry association but in a much more limited and indirect fashion. Via this organization, firms in the Dutch potato industry gain funds from state/EU agencies for industry development and collect levies for joint promotional activities to stimulate potato export and consumption. The importance of joint promotion for Dutch firms, however, has decreased considerably over the past decades, because the key

products of the industry have become less generic in nature (e.g., because of the introduction of monopolized varieties).

**Table 6.4** Functions of UK and Dutch industry associations in the potato industry

	UK potato industry	Dutch potato industry
<b>Strongly developed</b>	<ul style="list-style-type: none"> <li>• Dissemination of knowledge and information</li> <li>• Initiation and coordination of joint activities</li> </ul>	<ul style="list-style-type: none"> <li>• Not relevant</li> </ul>
<b>Moderately developed</b>	<ul style="list-style-type: none"> <li>• Development of common rules</li> <li>• Promotion of interests</li> <li>• Facilitation of horizontal cohesion</li> <li>• Facilitation of vertical cohesion</li> </ul>	<ul style="list-style-type: none"> <li>• Development of common rules</li> <li>• Dissemination of knowledge and information</li> </ul>
<b>Weakly Developed</b>	<ul style="list-style-type: none"> <li>• Coordination in case of industry-wide crises</li> </ul>	<ul style="list-style-type: none"> <li>• Initiation and coordination of joint activities</li> <li>• Promotion of interests</li> <li>• Coordination in case of industry-wide crises</li> </ul>
<b>Not developed</b>	<ul style="list-style-type: none"> <li>• Arbitration</li> </ul>	<ul style="list-style-type: none"> <li>• Arbitration</li> <li>• Facilitation of horizontal cohesion</li> <li>• Facilitation of vertical cohesion</li> </ul>

Source: see text

The facilitation of horizontal and vertical cohesion among the firms in the industry is regarded as a by-product of the main activities performed by the UK industry association. Therefore, these functions are moderately developed. In contrast, the Dutch industry association bundles together associations instead of firms, which makes these two functions not relevant to this organization.

Although the associations in both countries, among other things, exist to promote the interests of the industry, they do not distinguish themselves as lobby organizations. Nevertheless, the industry association in the UK is considered to be fairly well involved in promoting the interests of the domestic potato industry to the government. In the Netherlands the trade associations largely perform this function.



There are also some similarities between the two industry associations in the UK and the Dutch potato industries. Both industry associations are to some extent involved in the development of common rules. The Dutch industry association, in this respect, is mainly used as a vehicle to obtain a statutory basis for self-imposed rules and regulations developed by the members of trade associations. As yet, the industry association in the UK has used this function to introduce a levy system to finance its operations. Coordination in case of industry wide crises is considered a weakly developed function of both associations. The UK potato industry has not witnessed very many (if any) crises in recent years, while in the Netherlands the involvement of the industry association tends to remain secondary to the trade associations in such instances. Another similarity is that neither of the two industry associations is involved in the provision of arbitration services, because this is regarded as a more suitable function for trade associations.

## **6.2 Inter-firm cooperation and key social institutions**

Substantial differences have come to light in the comparison of the forms of inter-firm cooperation between the UK and Dutch potato industries. Both vertical and horizontal forms of bilateral cooperation appear more strongly developed in the Netherlands than in the UK. The same is true for trade associations (i.e., forms of horizontal multilateral inter-firm cooperation) in the Dutch potato industry which appeared considerably stronger developed than their counterparts in the UK. On the contrary, industry associations (i.e., forms of vertical multilateral inter-firm cooperation) turned out to be much more relevant to firms in the UK potato industry than in the Netherlands.

How can these marked cross-national differences in the patterns of inter-firm cooperation in the same industry be explained? To find answers to this question, the dominant forms of inter-firm cooperation that were found in the UK and Dutch potato industries will be linked with the nature of nationally distinct social institutions. The key social institutions addressed here include nature of state involvement with regard to the industry, the financial system, the legal system (as a provider of institutional-based trust), and the legitimacy of individualistic behavior.

### **6.2.1 State involvement with regard to the industry**

As will be shown below, the nature of state involvement with regard to the potato industry differs significantly between the UK and the Dutch. To gain a fuller

understanding of the differences, attention will be paid to historical developments in the state-industry relations in both countries from the 1930s onwards.

### *State involvement in the Dutch potato industry*

Contrary to many other parts of the agriculture sector, state involvement has always been 'facilitating' rather than 'regulatory' or 'laissez-faire' in nature with regard to the Dutch potato industry<sup>1</sup>. A market regime for potatoes never existed in the Netherlands. Nevertheless, by the 1930s the Dutch government became deeply involved in the development of Dutch agriculture. The government became in particular involved in the enhancement of the education, information, and knowledge infrastructure of the agriculture sector. Examples of this policy are the establishment and maintenance of Wageningen Agricultural University<sup>2</sup>, the Agricultural Economics Research Institute (LEI-DLO), and the National Council for Agricultural Research (NRLO), which are closely linked with the Dutch Ministry of Agriculture, Fisheries, and Nature Management. Obviously, the firms in the agriculture sector have greatly benefited from this infrastructure, which among others enabled the development of a highly skilled labor force, well-educated farmers, and high-grade technologies.

The involvement of the state in Dutch agriculture can be linked to structural developments at the end of the 19<sup>th</sup> century and the worldwide economic crisis of the 1930s. By the end of the 19<sup>th</sup> century a dense network of co-operatives, farmers' unions, and companies emerged as an initiative to enhance the political and economic position of farmers (Van Zanden 1985: 273-281). The development of these tight social structures happened along the ideological 'pillars' of liberalism, Protestantism, and Catholicism (Van Zanden 1997: 86). The highly organized agribusiness community gained considerable political influence which has been referred to as 'the green front' (Van Zanden and Griffiths 1989: 73). This political influence was largely based on the fact that the agribusiness community comprised an important part of the confessional parties' electorate.

Apart from gaining political influence, the high level of association in the agricultural community also facilitated a smooth acceptance of private-public organizations in the

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<sup>1</sup> The Dutch government, and later the EU, has been deeply involved in many parts of the agriculture sector through price, structure and trade policies (Maas 1994: 128).

<sup>2</sup> Contrary to the other Dutch universities, which are linked with the Ministry of Education, Culture and Science, the agricultural university in Wageningen comes under the Ministry of Agriculture, Nature Management and Fisheries.



early 1950s. The private-public organizations were a product of the institutional renewal initiatives of the Dutch government, which aimed to rebuild the national economy and to shape a new social order after W.W. II. The idea behind the new social order was strongly corporatist in nature; via public-private organizations employers and employees would be able to develop and govern their industries in harmony with each other. The legal basis of this new industrial order was the '*Wet op de Bedrijfsorganisatie*' (Branch Organization Act) of 1950. This act made it possible for firms of any Dutch industry to bundle themselves in quasi-governmental associations with limited statutory powers and with seats appointed to representatives from employers and employees. Strikingly, this private-public organizational arrangement became well established in the agriculture sector but hardly emerged in other parts of the economy. In the resulting structure of *Productschappen* (Industry Boards, bundling firms across the supply chain) and *Bedrijfschappen* (Product Boards, bundling competing firms) that was established, the government had limited influence. This was due to the fact that the coordination of these organizations not only became a responsibility of the state, which was the original plan. Responsibility was also assigned to a newly established organization, the '*Sociaal-Economische Raad*' (SER)<sup>3</sup>. According to the Branch Organization Act, the government should ask the SER for advice in cases of policy making about social-economic issues (Messing 1981: 30). What is important here is that the establishment of the public-private organizations evoked the need for trade associations (or stimulated the maintenance of the existing ones) which could provide the employers' representatives for the Boards. The resulting industrial order, which involved close cooperation between ministries, Boards and trade associations, remained effective until the 1980s. After this era, state involvement in the national industry – and particularly in the agribusiness sector – became more and more limited due to the rise of free market ideology. Under these circumstances the private-public system gradually deteriorated, though did not entirely vanish (Maas 1994: 127).

At present, new policies that also affect firms in the potato industry (such as laws to protect the natural environment and to increase food safety) tend to be formulated on the basis of consultations with representatives of business associations. Since the late 1980s there has been a revival of self-administration. On the one hand, the Dutch state aimed to limit the issuing of new laws, while, on the other hand, new policies were developed

<sup>3</sup> To date, the SER (which is sometimes nicknamed 'The Board of Wise Men') is still an important advisor of the government. However, it has become remote from the function as a coordinator of the virtually defunct Product- and Industry Boards.



and needed implementation. Hence, rather than acts, new state policies for food- and agribusiness are often implemented on the basis of covenants. In these formal agreements with the government, firms in an industry collectively agree on changing their behavior (for instance using PVC-free packing material). In this manner, as long as such covenants prove to work out, firms avoid the government's issuing of more and more laws to achieve its policy objectives.

Although the Dutch government never imposed regulations on the potato industry, such policy was considered in the past. In the post-W.W.II period potatoes constituted a major source of nutrition for the Dutch population. Because it was of great political importance to secure a stable supply of cheap food, having some degree of control over the potato industry became strategically important to the government. Nevertheless, the Dutch potato firms managed to remain largely aloof from state involvement. This was achieved through forms of self-administration, which had emerged during W.W.II and were expanded on the basis of the 1950 Branch Organization Act. In tune with this, the Industry Board for Potatoes (*Productschap voor Aardappelen*) was established. This, in turn, strengthened the relevance of trade associations, which represented all types of firms in the potato industry ranging from breeders to potato processors. In addition, cooperative state-industry relations were developed in which the chairmen of trade associations often played an important role. In this manner, the state gained limited but sufficient influence over the industry to secure the achievement of its political obligations, while the potato industry remained unregulated. From the 1970s onwards and despite the abundant supplies of food that resulted from the eminent success of the Common Agricultural Policy (Goodman 1996: 115; De Veer, Mansholt, Van Dijk and Veerman 1992) the political interest of securing a stable supply of potatoes vanished. The structure of private-public organizations was downsized and partially abandoned, but the spirit of self-administration and the consultative nature of state-industry relations remained relevant to the potato industry. In addition, the structure of voluntary trade associations remained intact.

Van Waarden (1992: 530) argued that crises and the attending increase of state intervention often provide a threat to industries and raise the need for the establishment of business (interest) associations. This supports the idea that the possibility of self-administration aimed to keep state involvement as low as possible, has stimulated collective action among Dutch potato firms via trade associations. These associations, in

turn, have been developed over a long time period, whereupon the thread of state intervention gradually declined and the Industry Board was abolished. As the organizations involved try to adapt to the altering circumstances in order to survive, these changes are likely to have encouraged the associations to develop services and roles exceeding the management of state-business liaisons and the facilitation of self-administration.

The consultative nature of state-industry relations, which remained intact, also implied a reduction of uncertainties for firms about the behavior of the state with regard to the industry. This environment, in which the state is a limited source of uncertainty and also explicitly stimulates joint action, is likely to encourage firms to cooperate with each other. In particular, the development of business associations, which was encouraged by the state, enabled Dutch potato firms to control and stabilize part of their business environment. The increased control allowed firms to work with long time horizons which, in turn, is likely to have facilitated the development of both vertical and horizontal cooperative inter-firm relations (cf. Whitley 1992b, Lane and Bachmann 1996: 376).

#### *State involvement in the UK potato industry*

Contrary to the traditional laissez-faire policy of the UK government with respect to industry (Blank 1973; Whitley 1992b; Lane 1989; 1992; 1995; 1996), the potato industry was regulated from the early 1930s until 1997. In this era, the behavior of the state with respect to the industry was neither really developmental nor facilitating in nature. In fact, the government combined features of the 'developmental' and 'laissez-faire' state types as it determined the output of potato production without being actively involved in the strategy of firms.

To secure the supply of potatoes, which represented an important source of nutrition in the UK, the British government developed a Potato Marketing Scheme based on the Agricultural Marketing Act from the 1930s. This Act authorized Ministers to provide an assured market for potato producers in Great Britain: '*Home production*' should meet '*home demand*' (PMB 1987). In 1934, the Potato Marketing Board (PMB) was established to realize this policy. The PMB functioned as an organization that advised the government and monitored the developments in potato production. The organization enjoyed statutory powers as to determine quotas, set minimum quality standards, and grant licenses to potato merchants. The necessary funds partially came from levies paid by potato firms and from the state. In 1997, the Potato Marketing Scheme was



eliminated under pressure from the consequences of EU membership and a strong lobby supported by potato processors and retailers. As a consequence, the PMB was downsized, lost most of its statutory powers and was transformed into the British Potato Council (BPC). This new organization became a levy-financed organization with the task to promote the development of the British potato industry. The behavior of the state with regard to the potato industry became largely *laissez-faire* in nature. In tune with this, the influence of the government in the UK potato industry became largely limited to the impact of general regulations such as the 1990 Food Safety Act and the 1990 Environmental Protection Act.

The state has played a dominant regulating role in the UK potato industry. From the 1930s to the late 1990s, a market regime was effective involving quotas, fixed prices, and centrally determined quality standards. The dominant presence of the state in the UK potato industry, until recently, can be linked to the relatively weak development of cooperative relations between UK potato firms. Indeed, the state, via the PMB, can be regarded as one the most important sources of (un)certainty for potato firms. It is likely that this has been a hindering factor for the development of either horizontal or vertical cooperative inter-firm relations. The reasoning is that in such tightly regulated markets managers are encouraged either to 'go with the flow' or to compete for political support and short-term advantages, rather than to engage in joint activities (cf. Whitley et al. 1996: 399; Rademakers 1998a). Moreover, the sudden transformation from market regulation to a free market system, combined with the absence of alternative market ordering mechanisms, increased uncertainties of firms concerning the stability of supply and demand. These circumstances, at least in part, explain the growing dominance of large integrated firms in the UK potato industry and the apparent low relevance of inter-firm cooperation after the transformation. Moreover, the regulation of prices and quantities by a quasi-governmental organization, which existed for decades, provides a partial explanation for the finding that UK trade associations, in particular, developed as lobby organizations. After all, because of their lobby activities, the trade associations were particularly useful for potato firms to gain some influence over the actions of the PMB and the state. Clearly, the regulation of the industry by the state has been particularly supportive of the development of a strong industry association. Nevertheless, since the abandoning of the regulations in the late 1990s, the industry association has shown a remarkable strength to continue. This can be seen in light of the behavior of the state with regard to the industry, which became *laissez-faire* in nature,



while among the potato firms there remained a need to have a common organization for the promotion of industry cohesion and development.

### 6.2.2 The financial system

At first glance, the way UK and Dutch agribusiness firms tend to meet their capital needs seems not to differ greatly. In both countries bank loans are an important source of capital for firms, while the banks are usually not involved in the strategies of firms. Nevertheless, some remarkable differences exist in the financial systems of both countries, in particular with respect to the agriculture sector.

#### *The financial system in the Dutch agriculture sector*

The Dutch financial system is quite polymorph in nature, with no clear dominance of capital markets over bank loans or vice-versa. There is a well-developed capital market, banks are generally involved in the provision of medium- and short-term credit, and pension funds and insurance companies<sup>4</sup> are the main providers of long-term credit to the industry (Van Iterson and Olie 1992: 110; Messing 1981: 52). In the agri-food industry, however, the financial system is dominantly credit-based. The divergent nature of the financial system in the Dutch agri-food industry can be understood from a historical perspective, which will be provided below.

Banks did not play a very important role in the industrialization of the Dutch economy that took place in the late 19<sup>th</sup> century. Rather than banks, private railway companies and large steamship lines were the major capital providers in this process (Messing 1981, Van Zanden and Griffiths 1989: 9). This situation changed between 1913 and 1920 when bank loans became more and more important as a source of investment capital in the Netherlands. Many new firms were established or expanded their business during this period<sup>5</sup> (Van Zanden and Griffiths 1989: 124). However, an economic depression that hit the Dutch economy in the 1920s stopped this development, because many banks were confronted with serious problems caused by bad loans. The banks responded with a retreat from granting long-term credits to industrial firms and turned to

<sup>4</sup> In 1990, the Dutch government abolished the regulatory division between banking and insurance which gave way to mergers and takeovers among major Dutch banks and insurance companies. Since the early 1990 Dutch banks have also moved towards the 'Allfinanz' concept (Hulsink 1997).

<sup>5</sup> Among these firms were the predecessors of multinationals such as Philips, Royal Dutch Shell, Koninklijke Hoogovens, and KLM.

their traditional role of merchant bankers with a focus on short-term credit. As a result, retained earnings (i.e., internal funding) and the stock exchange became major sources of investment capital. In particular, internal funding became common practice, as this was stimulated by the Dutch state via favorable tax regulations (Van Zanden and Griffiths 1989: 244).

Apart from these developments in the Dutch financial system as a whole, a more or less autonomous development took place in the agriculture sector of the Dutch economy. By the end of the 19<sup>th</sup> century the Dutch agriculture sector witnessed the establishment of a number of co-operative banks<sup>6</sup> (Van Zanden 1985: 279; Hulsink 1997: 115). This meant that in the Dutch banking sector a dual structure developed; commercial banks focused on the industry and co-operative banks became dominant in the agriculture sector of the Dutch economy. As a result, apart from internal funding, loans from co-operative banks have become a major source of investment capital for Dutch farmers and agri-food firms<sup>7</sup>. These loans usually involve long-term relations between the co-operative banks and their customers/members. In addition, the co-operative banks developed information systems to be able to assess the risks involving their loans as well as to stimulate the performance of their customers. Up to present, the co-operative bank structure in the Netherlands has flourished but not without undergoing considerable structural change. In the early seventies the two major co-operative banks in the Netherlands, the Raiffeisenbank and the Boerenleenbank merged into one central co-operative bank: the Rabobank. This bank is known to represent a market share of about 90% of the Dutch agri-food sector (Maas 1994: 168), with a total value of approximately NLG 30 billion in 1996<sup>8</sup>. The relevance of bank loans in the Dutch agri-food business is strengthened because of the dominant presence of co-operatives in this sector. Due to the ownership structure of the co-operative (the owners are also the suppliers or customers of the firm), obtaining investment capital from the stock market is at best an uncommon option. Hence, co-operatives generally draw their investment capital from retained earnings and bank loans. However, if co-operatives wish to expand their business both rapidly and substantially (for instance to enjoy economies of scale or

<sup>6</sup> Co-operative banks included the Friesland Bank, the Protestant 'Raiffeisen' banks, and the Catholic 'Boerenleen' banks. These banks were established by village communities and farmers who, in this way, successfully improved their access to investment capital (Van Zanden 1985).

<sup>7</sup> Exceptions are multinationals such as Unilever, CSM and Nutreco, which are listed at the Amsterdam stock exchange.

<sup>8</sup> Source: *Financieel Dagblad*, No. 49, March 8, 1996.

to gain market power), this often involves higher capital needs than can be met either via internal funding or bank loans. In such cases growth is realized via mergers which tend to be preceded by intense cooperation between the firms involved. If a merger appears not possible, co-operatives have the option to engage into collaborative arrangements with other firms.

The financial system in the Dutch agriculture differs from the more polymorph system that prevails in other sectors of the Dutch economy. The capital needs of Dutch potato firms are generally filled via internal funds and loans from co-operative banks. Firm-to-bank relations are usually long-term in nature and involve extensive information services. As a result, managers can work with long time horizons for their investments. As stock capital is not relevant to them, they do not have to meet the short-term requirements (i.e., favorable quarterly profit figures) of anonymous shareholders. The absence of uncertainties about the availability of capital in the short run and the irrelevance of hostile takeovers provides management with more space to maneuver on the basis of long-term horizons. The stability in the financial resource base of firms and the inherent possibility to work with long-term horizons is likely to facilitate the development of stable relations between firms (Lane 1996: 279; Lane and Bachmann 1996: 377; Whitley 1992b: 32-35).

The nature of the financial system in the Dutch agribusiness sector is considered to influence the relative importance of business associations as well. The information services of banks that prove investment capital may substitute part of the information and knowledge-disseminating role of business associations. However, the pressure for firms (and in particular co-operatives) to expand their business or enhance their market position via either mergers or cooperation enhances the need of managers for personal contact with potential partners. This adds to the relevance of business associations through which managers can socialize, obtain first-hand information about developments of (potential) partners, and can have meetings without being noticed in an early stage by competitors or worse, by members of the co-operative<sup>9</sup>.

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<sup>9</sup> Rumors about mergers between co-operatives tend to cause heavy unrest between the members of the organizations involved and may lead to early complications in the process or even a brake-off. Keeping merger plans secret as long as possible gives managers the time needed to work out their plans before they have to defend them to the members of the co-operatives.



*The financial system in the UK agriculture sector*

The financial system in the UK, including the agricultural sector, is largely capital-based (Hutton 1996: 132). The dominance of this system can be explained from a historical perspective. In the early-industrialized UK economy, bank loans became common during the 19<sup>th</sup> century. However, after the bad experiences of banks that were damaged due to over-extension, lending became mainly confined to short-term credit (Lane 1995: 30). Towards the end of the century, UK firms in need of external capital for new investments began to raise capital by issuing shares on the stock market. In this way the stock market became the most prominent source of capital, apart from internal funding through retained earnings. In this capital-based financial system the managers of UK firms financed with equity capital had to cope with the short-term time horizons of stock holders and their expectations of quick and substantial profits (Hutton 1996: 134; Lane 1995: 31). In addition, the banks never became closely involved in the business of their client firms because they mainly provided short-term loans. Moreover, the development of close firm-to-bank relations was hindered as the government discouraged large bank stakes in non-financial firms<sup>10</sup>. Throughout the 20<sup>th</sup> century, the nature of the UK financial system has not changed very much. The system is still strongly equity-based and centered on the stock market (Lane 1995: 47).

The financial system in the UK agriculture sector is also capital-based in nature, while co-operative banks are virtually non-existent. There is one co-operative bank in the UK, named Coop. This bank, however, is neither an important player in the UK nor focused on the agriculture sector. The major (but non-co-operative) banks that operate in this sector include Barclay, Lloyds, Midwest, Midland, and AMC. Their investments in the UK agribusiness equaled an amount of approximately NLG 19 billion in 1996<sup>11</sup>. A possible reason for the absence of a co-operative bank system is the farm ownership structure in the UK, which is likely to have hindered the development of co-operative banks by farmers. In the beginning of this century, the ownership relations in UK agriculture were dominated by a 'landlord-tenant farmers' system. In this system farmers owned no land, while the landlords were not dependent on income from their land alone (Tracy 1989: 48). On the contrary, in the Netherlands most farmers were poor, small but independent, and had their own (small) piece of land. It is this

<sup>10</sup> Prowse, S. (1994:16f), Corporate Governance in an International Perspective: A Survey of Corporate Control Mechanisms among Large Firms in the United States, the United Kingdom, Japan and Germany, Basle: Bank for International Settlements. Reference adapted from Lane (1995: 30).

<sup>11</sup> Source: Financieel Dagblad No. 49, March 8, 1996.

independence of small farmers that can be considered not only an important condition for, but also a result of, the establishment of co-operative banks. Obviously, the prevalence of the landlord-tenant system was not very conducive to the development of financial institutions that both required and reinforced the independence of farmers.

The financial system in the UK is largely capital-based: investment capital is largely obtained via short-term bank loans and the stock market. It was argued that the 'mores' of the capital-based financial system push managers to adopt short-term time horizons which are likely to undermine the development of long-term cooperative relations among firms (Franks and Mayer 1990; Whitley 1992b). In addition, the access to cheap stock capital encourages firms to expand via takeovers, which then encourages vertical and horizontal integration rather than the development of cooperative inter-firm relations. Moreover, in a capital-based financial system the handling of risks can be accomplished more easily by highly dispersed shareholdings than by pooling risks through cross-shareholding or collective agreements between firms (Lane 1997: 66). In addition, as was observed by Turner (1988: 173), in these circumstances the attempts of UK-based firms to create horizontal links via trade associations tend to be short-lived and not very effective.

The capital-based financial system can be regarded as one of the social institutions that facilitates the dominance of spot-market relations which, in turn, is likely to reduce the relative importance of trade associations in the UK potato industry. The nature of the financial system in the UK can also be connected to the finding that some UK potato firms are part of publicly listed corporations. This contrasts with the situation in the Netherlands where none of the Dutch-owned potato firms has such a listing. In line with this, it can be noted that the small firms in the UK potato industry are not financed by stock market capital. They rely on retained earnings and short-term bank loans. Because of limited possibilities for substantial growth, these firms have become niche players or have been sold to larger competitors. This is reflected by the overall industry structure with a few large dominant organizations, a few medium-sized firms, and a host of small enterprises.

### **6.2.3 Laws and the legal system**

The nature of the legal system is considered to influence the prevalence of particular types of trust between exchange partners. This can be linked with the finding that in the



Dutch and UK potato industries the basis of trust in exchange relations differ considerably. Formal and detailed contracts prevailed in the UK while a combination of standard contracts and personal relations were found to be more important among the Dutch firms.

### *The Dutch legal system*

The Dutch legal system is formal and detailed in nature. According to Lane and Bachmann (1996: 386) such a 'Germanic' legal system provides a basis for greater uniformity and hence the predictability of both the use and evaluation of contracts by the parties involved in an exchange relation. Such a system makes the use of general conditions of sale more relevant to firms, because it provides them with a clear legal basis. Hence, the formal legal system is likely to encourage the use of standard contracts rather than drawing up highly specified documents for every transaction. Standard contracts are considered well suited for use in combination with personal relations as a basis of exchange relations. These contracts, if enforced by formal law, can provide some level of certainty to the exchange parties. This is considered as conducive to the generation of a climate of goodwill in which trust may grow (Lane 1996: 285). Such circumstances, in turn, can be regarded supportive to the development of cooperative inter-firm relations. These were found in the Dutch potato industry. Among the Dutch potato firms, formal contracts are considered important but secondary to informal bases of trust underpinning the long-term relationships in which their exchange relations tend to be embedded.

With regard to the relative importance of business associations, it is relevant to emphasize the 1950 Business Organization Act (see the previous section). This Act provided business associations with a clear legal position with respect to their members and other organizations. In this way, the Act facilitated, to a large extent, the establishment of new business associations and the strengthening of the positions of existing ones. In addition, it provided a basis for Dutch business associations to develop a range of functions, including arbitration, in case of trade conflicts.

### *The legal system in the UK*

The empirical nature of British common law, which works according the principle of 'case law,' implies a high degree of uncertainty for firms involved in commercial exchange relations. Moreover, the importance of legal precedence reduces the relevance of general conditions of sale being a source of certainty in exchange relations. For



instance, Lane and Bachmann (1996: 386) point out that in Britain payment periods for goods received are not legally codified, which implies that much delayed payment is not sanctionable by law. The greater reliance on voluntarism in the regulation of exchange relations in the UK can be linked to the finding that many UK potato firms inclined to use their own conditions of sale. In this situation, the large (potato buying) firms, in particular, appeared able to impose their conditions to their exchange partners. In circumstances where large firms in large measure define the rules of the game, the generation of trust based on personal relations is not likely to develop very well. The uncertainties for smaller firms that are inherent in this case law system are likely to encourage the development of more adverse inter-firm relations, rather than cooperation. Rather, firms may be inclined to develop their own rules and make use of detailed contracts to have as much evidence as possible, to be used to put buyers or suppliers under pressure, if problems or disagreements were to arise.

The relatively weak importance of trade associations in the UK potato industry can be linked to their equally weak legal status. The establishment and development of trade associations in the UK was inhibited in the first part of the 20<sup>th</sup> century by a lack of laws that could clarify the legal position of these organizations. As stated by Turner (1988: 176): *'The law was blind to trade associations as such, and treated them on the same footing as associations of workers.'* The 1876 Trade Union Act made the situation worse because it made all agreements within any trade combination unenforceable. Hence, trade associations had no means to enforce any joint activity on unwilling members. This situation did not change during the first half of the 20<sup>th</sup> century. Moreover, the uncertainty about the position of trade associations was enhanced by the nature of the legal system in the UK. As pointed out earlier, British common law has been based on an evolutionary body of case law. Disputes involving trade associations were looked at case by case and in the late 19<sup>th</sup> century outcomes of lawsuits were not very favorable to these organizations (Turner 1988: 177). Moreover, with respect to the UK agriculture, another law hindered the development of trade associations. The Agricultural Marketing Act from the 1930s led to the establishment of Marketing Boards which regulated parts of the agriculture sector (Tracy 1989), including the potato industry. Because of the vast influence on the industries they operated in and their wide range of functions, the statutory organizations (such as the Potato Marketing Board) are likely to have impeded the development of trade associations.

#### 6.2.4 The legitimacy of individualistic behavior

Individualistic behavior can be considered highly legitimate both in UK and Dutch society (Hofstede 1980). However, with regard to the agri-food industry, the nature of individualistic behavior and the importance of collectivistic elements differ greatly between the two countries. In the UK, collective aims are generally inferior to individual interests. Moreover, collective institutions tend to be reduced to individual self-interest (Macfarlane 1978; Whitley 1992b: 22). In contrast, individualism in the Dutch society is largely based on the Calvinist moral of accountability as an individual responsibility (De Voogd 1996: 121). In addition, individualism in Dutch society is overshadowed by the great importance given to conformity (Van Iterson and Olie 1992: 107; Van Iterson 1997).

##### *Individualism in the Netherlands*

The Dutch 'version' of individualism has deep roots in the historical development of the country. Principles of cooperation and consensus developed as pragmatic solutions to the strongly religious fragmentation in the Dutch Republic of the 17th century and the need to unite in order to withstand external hostilities from, among others, England. This led to the emergence of a society with a strongly developed corporatist system, with segregation between ideological groups united by some form of coalition among their elite groups (Van Iterson 1997: 57).

The cooperative spirit has developed particularly strong among farms and firms in the Dutch agricultural sector. Over several ages, individual farmers (and later also firm owners and managers) have developed and reproduced the conduct of compromise and coalition in the Dutch agricultural sector. The early development of these principles can be tracked back to the middle ages. From this era onwards, the need for collective action was encouraged by a combination of factors. These included the weak development of feudalism or other forms of centralized power governing farmers/peasants (De Voogd 1996: 34; 42), the need to bundle strengths to reclaim land from the water, and to curb the danger of floods. Moreover, it was a necessity to compensate for the smallness of most farms with regard to buyers. These circumstances, which have remained remarkably stable over many centuries, made cooperation among autonomous actors both legitimate and/or beneficial.

By the turn of the 19<sup>th</sup> century, Dutch farms generally were small family businesses which had a weak position with regard to their less numerous customers. This situation led to the establishment of co-operatives, which created a countervailing power of



farmers against merchants and retailers (Van Zanden 1985: 274). By the beginning of this century co-operatives had become dominant organizations in the Dutch agri-food industry and this structural feature has persisted to present (cf. Van Zanden 1985: 362). The long tradition in Dutch agriculture, in which collective action among individuals has dominated over the pursuit of self-interest, can be seen as an important facilitating factor for the development of both vertical and horizontal inter-firm relations. Clearly, the notion of cooperation has a positive connotation in the Dutch potato industry as well, where the managers of many firms have strong roots in agribusiness. Moreover, it is likely that the strong legitimacy of consensus, coalition, and cooperation in the Dutch agricultural sector has encouraged the development of business associations and has also been reinforced by these organizations.

### *Individualism in the UK*

Traditionally, business behavior in the UK has been characterized by the principle of individualism (Yuzawa 1988: 199). Pursuing self-interest is legitimate and adverse competitive behavior among firms, rather than cooperation, is common both in the industry and in the agriculture sector. In addition to this, agriculture in the UK has shown a path of development that is markedly different from their Dutch counterparts. Contrary to the Netherlands, in the UK feudalism had become widespread in the centuries before the country transformed into a capitalist society (Macfarlane 1978: 34). In this feudal era large-scale farm businesses emerged that were owned by landlords and run by tenant farmers. In fact, this system did not change when the country became industrialized. The landlord-tenant structure hindered the rise of independent farmers and inhibited common action (Tracy 1989: 49). This is exemplified in the meager role of farmer's co-operatives in comparison with private firms in the UK agri-food industry. Concerted action in the UK agribusiness has remained limited to the promotion of common interests with respect to the government. However, these actions generally have not been very successful (Davenport-Hines 1988). The limited scope of collective action in the UK is also reflected by the findings from the field study that most of the trade associations in the UK potato industry function mainly as lobby organizations. The development of effective business associations with a broader range of functions is likely to have been inhibited by the legitimacy of pursuing self-interest for the mere fact that it hinders members to overcome the dissimilarities in their interests (cf. Okayama 1988: 228). The same line of reasoning can be followed with regard to the development of other forms of vertical and horizontal cooperation between firms in the UK potato



industry. The dominance of spot-market relations over vertical inter-firm cooperation, the low degree of horizontal inter-firm cooperation and the utilitarian nature of the few partnerships that have been found in this industry fit well with the predominantly individualistic attitude that prevails in the UK.

### 6.3 The UK and Dutch inter-firm relations in their national contexts

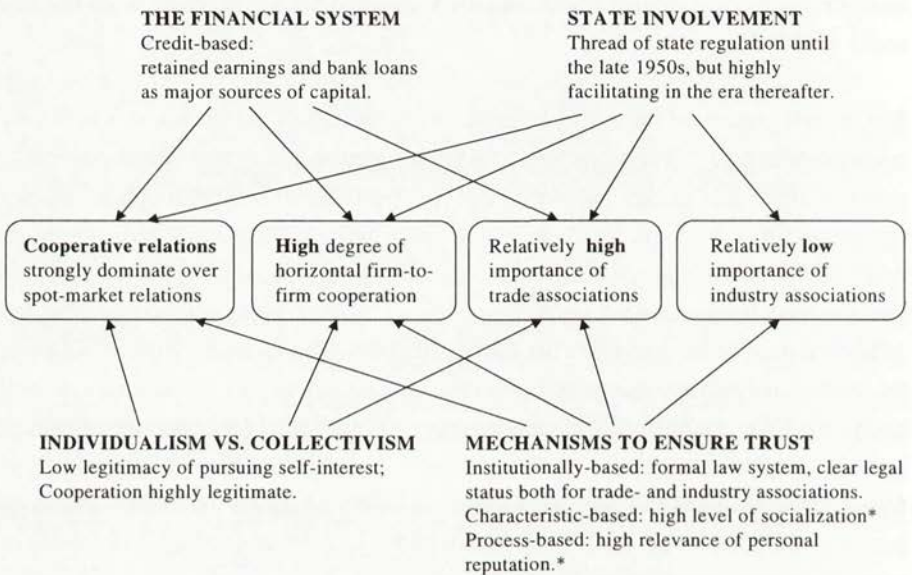
The results from the discussion on the nature of nationally distinct social institutions and their likely influence on the development of forms of inter-firm cooperation in the UK and Dutch potato industries are summarized in the Figures 6.4 and 6.5. The two figures show the contrasting nature of both national systems of inter-firm organization and key social institutions.

The general pattern of inter-firm organization in the Dutch potato industry is largely cooperative in nature. This is reflected by the strong dominance of vertical cooperative relations over spot-market relations and the high degree of cooperation between competing firms. Moreover, trade associations are well developed and perform a wide range of functions. Industry associations, on the contrary, are not very relevant to the Dutch potato firms anymore since the system of branch organizations set up in the 1950s lost most of its strength in the 1980s and 1990s. The nationally distinct nature of the institutional environment firms in the Dutch potato industry are embedded in, is very likely to have facilitated the development of forms of cooperative inter-firm organization. The facilitating nature of the state, the credit-based financial system, the formal law system and informal mechanisms to ensure trust, and the low legitimacy of pursuing self-interest that apply to the Dutch potato industry form a cohesive system of mutually reinforcing influences in this respect.

In contrast with the findings in the Netherlands, inter-firm organization in the UK potato industry is dominantly adverse in nature. Spot-market relations dominate over vertical cooperative relations, while cooperation between competing firms is very limited. In line with this, the importance of trade associations, apart from their lobby function, is relatively low. Strikingly, the industry association is highly active and quite relevant to firms in the UK potato industry, certainly in comparison with the trade associations and its Dutch counterpart. The way and degree in which forms of inter-firm cooperation have developed in the UK potato industry can be connected to the influences from key

social institutions that are nationally distinct in nature. These social institutions include state regulation of the industry (replaced by a laissez-faire stance in 1997), the capital-based financial system, the case law system, the virtual absence of informal basis of trust, and the high legitimacy of pursuing self-interest. This system of social institutions is likely to encourage firms to be self-reliant and to discourage the development of cooperative inter-firm relations.

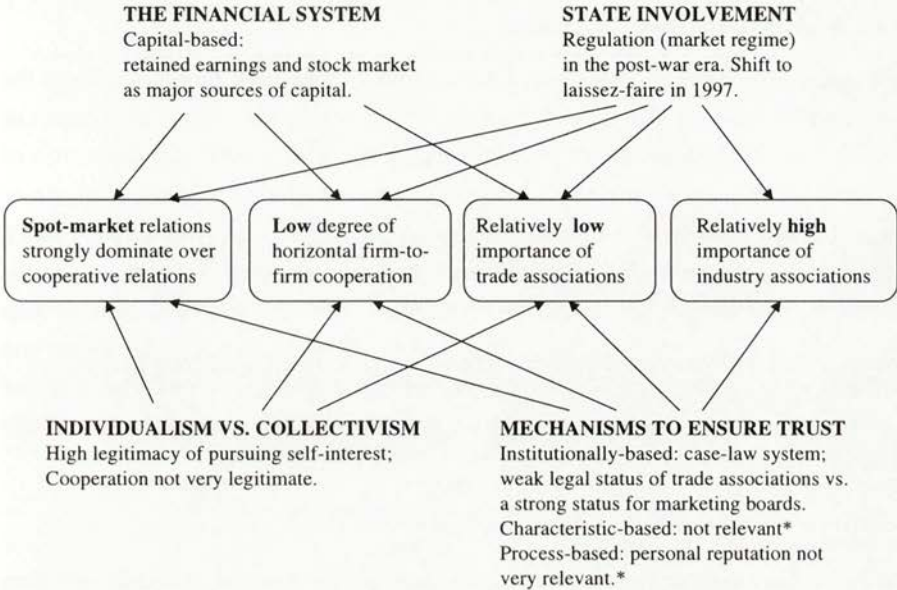
**Figure 6.4** Inter-firm relation characteristics and the nature of key social institutions in the Dutch potato industry



\*see Chapter 5

Source: see text

**Figure 6.5** Inter-firm relation characteristics and the nature of key social institutions in the UK potato industry



\*see Chapter 5

Source: see text

Not incorporated in Figures 6.4 and 6.5, but worth paying attention to, is the unanticipated finding that a number of mutually influencing forms of inter-firm cooperation stand out in the Dutch and UK systems of inter-firm organization. The Dutch trade associations seem to gradually have pushed aside the initially quite powerful industry association by substituting most of its activities. In this manner the members of the trade associations in fact increased their joint control over the development of the industry. Moreover, the trade associations, as forms of multilateral horizontal inter-firm cooperation, are likely to facilitate bilateral cooperative arrangements between firms as well.

Finally, it seems that in the UK the dominant presence of the industry association has limited the relevance of trade associations. Contrary to the Dutch trade associations,



however, the active role of the UK industry association cannot be considered to have facilitated the development of bilateral forms of cooperative inter-firm relations.

#### 6.4 Feedback to the propositions

In Chapter 3 (Section 3.5.2) a total of 5 propositions have been formulated about the combined influence of nationally distinct key social institutions on the development of forms of inter-firm cooperation. The five propositions cover a continuum constituted of distinct combinations of key social institutions that, in different degrees, facilitate or hinder the development of inter-firm cooperation (see Figure 6.6). Propositions 1 and 2 represent the extremes of this continuum. Propositions 3 to 5 cover the major 'middleground' possibilities. In the following, the propositions will be confronted with the empirical results from the field study and the discussions about the nature and influence of key social institutions in the UK and Dutch potato industries. The results of this discussion are summarized in Figure 6.6, which can be found at the end of this section.

Proposition 1 stated that:

Firms are likely to develop cooperative rather than adverse inter-firm relations if they are embedded in an institutional environment that combines a facilitating state and a credit-based financial system, trust based on either collective identities or a formal law system, and cultural conventions that legitimate collectivistic behavior.

This proposition reflects one of the extremes of the continuum, which makes it virtually ideal-typical in nature. Despite of this, the proposition is strongly supported by the findings reported on the inter-firm organizational system of the Dutch potato industry. The nature of all key social institutions matches with the proposition: state behavior is facilitating, the financial system is largely credit-based, the legal system is based on formal law, collective are identities well developed, and pragmatic forms of collectivistic behavior are highly relevant. The findings from the field study indicate that the nature of the key social institutions in the Dutch potato industry mutually reinforce each other with respect to their suggested facilitating influence on the development of cooperative inter-firm relations. In accordance with this observation, this study revealed that both vertical and horizontal cooperative inter-firm relations strongly dominate over

adverse relations between the buyers, suppliers, and competitors in the Dutch potato industry. However, the relevance of the industry association as a form of inter-firm cooperation appeared to be very limited. As was pointed out earlier, this may be due to well-developed trade associations in the industry, which largely substitute for functions that could be (or were) performed by the industry association.

Proposition 2 stated that:

Firms are likely to develop adverse rather than cooperative relations if they are embedded in an institutional environment that combines 'developmental' or 'laissez-faire' state behavior and a capital-based financial system with trust largely based on either past experiences or a case law system, and cultural conventions that legitimate individualistic behavior.

The findings about the patterns of inter-firm organization and the nature of key social institutions in the UK potato industry support this proposition, which represents the other extreme of the continuum. It must be noted, though, that state involvement in the UK potato industry has been neither developmental nor laissez-faire but strongly regulatory in nature for decades. In fact, until the late 1990s, state behavior in the UK potato industry combined features of the 'developmental' and 'laissez-faire' types, undermining the development of cooperative inter-firm relations. After all, the nature of the key social institutions in the UK potato industry are mutually reinforcing with regard to their influence on the development of inter-firm relations. The financial system is capital based, the legal system is based on case law and individualistic behavior is highly legitimate. The nature of these social institutions is considered supportive to the development of adverse, rather than cooperative inter-firm relations. Accordingly, vertical inter-firm relations in the UK potato industry are dominantly spot-market in nature and bilateral forms of horizontal inter-firm cooperation, apart from some joint ventures, are rare. Moreover, trade associations are present but tend to have a fragmented membership base and a limited range of functions. Strikingly, the industry association is well developed and can be linked with the dominant role of the state in the past and the absence of a well-developed structure of trade associations in the UK potato industry.

The remaining 'middleground' propositions concern the influence of less cohesive institutional environments on the development of cooperative inter-firm relations.

Proposition 3 stated that:

Firms are likely to develop cooperative inter-firm relations if they are embedded in an institutional environment in which key social institutions that are facilitating in nature are more dominant than the hindering ones.

Proposition 4 stated that:

Firms are likely to develop spot-market relations if they are embedded in an institutional environment in which key social institutions that are hindering in nature are more dominant than the facilitating ones.

Proposition 5 stated that:

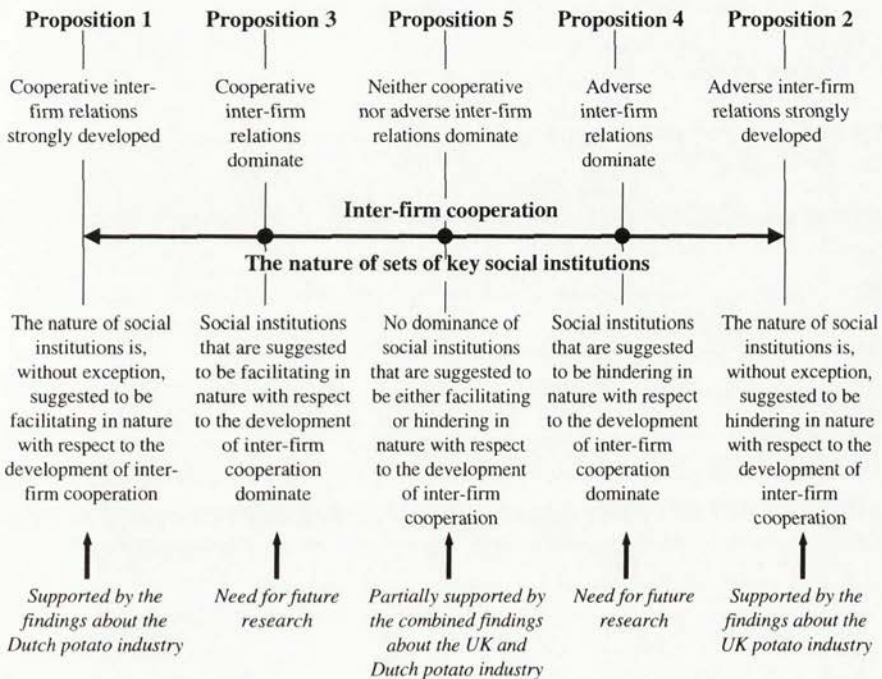
A disjointed pattern of cooperative and spot-market relations is likely to develop in industries that are embedded in an institutional environment in which there is no dominance of key social institutions that are either facilitating or hindering in nature.

Because the two cases in this study turned out to involve nationally distinct sets of mutually reinforcing social institutions that reflect the extremes of the continuum developed in Chapter 3, their usefulness to address the relevance of the three remaining propositions is limited. Obviously, future research is needed to gain empirical evidence for these propositions. Nevertheless, the propositions to some extent appeal to the shifts that have occurred in the behavior of the state in the UK and to a lesser degree in the Dutch potato industry (see also Chapter 7). While the nature of the other social institutions remained remarkably stable over the past decades, state behavior in the UK shifted from a regulating role to a *laissez-faire* policy in the late nineties. In the Netherlands, the performance of the potato industry was of considerable political interest to the state in the post-war years but faded in the 1970s and the years thereafter. Strikingly, in both instances the decrease of state interest in the industry led to a considerable decline in the relative importance of industry associations. In the Netherlands, the organization was virtually eliminated on instigation of the (members of the) trade associations, while in the UK the industry association was considerably downsized but remained quite active. However, the influence of the state in both



countries did not change with respect to the other forms of inter-firm cooperation in the industry. The Dutch state remained largely facilitating, while in the UK the shift of state behavior from regulating to laissez-faire meant a continuation of the negative influence on the development of cooperative inter-firm relations. This finding supports proposition 5, which indicates that shifts in the nature of social institutions can lead to changes in particular forms of inter-firm organization, while other forms remain largely unaffected.

**Figure 6.6:** Summary of the confrontation between the propositions and empirical findings



Source: see text

## 6.5 Summary

In this chapter the findings from the field study on inter-firm cooperation in the UK and Dutch potato industries have been compared and contrasted with each other and also connected with the nature of key social institutions. This has revealed that the Dutch and UK potato industries constitute two considerably different systems of inter-firm

organization. The patterns of inter-firm cooperation in the UK and Dutch potato industries appeared to contrast with each other to a large extent. Moreover, the nature of key social institutions turned out to be both nationally distinct and industry-specific. The empirical findings supported the propositions stating that national contexts comprised of mutually reinforcing social institutions have either a marked positive or negative influence on the development of forms of inter-firm cooperation. Finally, it was pointed out that the relative importance of industry associations appeared to vary considerably with both the degree of state interest in the industry and the strength of trade associations.

## Chapter Seven

### CONCLUSIONS

*This concluding chapter presents a retrospective view of the research outcomes. The key findings are reviewed and fed back to the central research question. In addition, the implications of the research findings for management, business associations, governments, and also theory development are discussed. Moreover, attention is paid to the limitations of this study. Finally, an agenda for future research is presented and concluding remarks are made.*

#### 7.1 Key findings and answers to the central research question

##### 7.1.1 Review of the findings

Four distinct forms of vertical and horizontal inter-firm cooperation in the UK and Dutch potato industries have been described, analyzed and compared with each other. This included bilateral and multilateral forms of inter-firm cooperation. The bilateral forms taken into account were both vertical (i.e., buyer-supplier) and horizontal (between competitors) forms of inter-firm cooperation. Trade- and industry associations (or business associations) have been taken into account as forms of multilateral inter-firm cooperation (see Chapter 3). The bilateral forms of inter-firm cooperation have been addressed with regard to the degree and relevance of their constituent 'flows' of knowledge and information, mutual expectations, and resources. Insights into the relative importance of the business associations in the UK and Dutch potato industries were obtained through investigating the relevance and degree of development of a range of possible functions of these organizations (see Chapter 5).

The four forms of inter-firm cooperation in both countries have been placed against a background of nationally distinct social institutions (see Chapter 6). Based on the



literature of economic sociology, four key social institutions that are considered to influence the development of inter-firm cooperation have been identified. These include 1) the degree and nature of state involvement in the industry, 2) the nature of the financial system, 3) dominant mechanisms to ensure trust between exchange partners, and 4) the legitimacy of individualistic behavior as opposed to collectivistic behavior (see Chapter 3).

Considerable differences have been revealed with regard to the nature of key social institutions and the forms of inter-firm cooperation in the UK and Dutch potato industries. The combined influence of the nationally distinct social institutions in each industry differs greatly between the two countries. In the Netherlands, the institutional environment is supportive of the development of cooperative inter-firm relations. The involvement of the Dutch state with respect to the industry is facilitating in nature, leaving firms much space for initiatives and self-governance. Moreover, the financial system in the Dutch agricultural sector is largely credit-based, involving access to medium and long-term (bank) loans that enable managers to work with long-term time horizons for their investments. Concerning mechanisms to ensure trust, managers of firms in the Dutch potato industry can rely on a formal law system, personal reputation, and social control. The possibility of relying on different and well-developed bases of trust is very likely to facilitate the development of cooperative inter-firm relations. Finally, the managers of most Dutch potato firms consider individualistic behavior, in the sense of pursuing self-interest at the expense of others, self-defeating rather than legitimate. Moreover, pragmatic cooperation is highly valued.

The institutional environment of firms in the UK potato industry is considerably less supportive to the development of cooperative inter-firm arrangements. Rather, the combined influence of the key social institutions encourages self-sufficiency, spot-market relations, and adverse competition. The UK government has regulated the domestic potato industry for many decades, which made the state a key source of (un)certainity to firms. The market regime in the UK potato industry made the development of cooperative inter-firm relations largely irrelevant. In the late 1990s, the market regime was abandoned, which increased the uncertainty of firms about the security of their supplies and/or sales. Given the absence of any tradition of cooperation, the laissez-faire type of state behavior that followed the market regime encouraged the development of greater self-sufficiency, spot-market relations, and adverse competitor relations. In addition, the financial system in the UK is strongly capital-based, implying

that firms (including those in the agricultural sector) have to rely on retained earnings, short-term bank loans, and (if possible) the stock market for their capital needs. The demand for quick results that comes with the external sources of capital in this financial system is likely to have encouraged management to work with short time horizons. Mechanisms to ensure trust between exchange parties are weakly developed in the UK, which hampers the development of cooperative inter-firm relations. In particular, the smaller firms are confronted with the uncertainties that come with the 'case law'-based legal system, while managers indicated that personal reputation and social control are not very relevant as a basis of trust. Finally, individualistic behavior in the sense of pursuing self-interest is considered highly legitimate in the UK business community. This is seen to have encouraged the development of adverse inter-firm relations, rather than cooperative business-to-business links.

**Figure 7.1** Inter-firm cooperation and social institutions in the UK and Dutch potato industries of the late 1990s

			The Netherlands	United Kingdom
<b>Forms of inter-firm cooperation</b>	<i>Bilateral</i>	<i>Vertical</i>	+	-
		<i>Horizontal</i>	+	-
	<i>Multilateral</i>	<i>Vertical</i>	-	+
		<i>Horizontal</i>	+	-
<b>Key social institutions</b>	<i>State involvement in the industry</i>		Facilitating	Regulating, but laissez-faire since '97
	<i>The nature of the financial system</i>		Credit-based	Capital-based
	<i>Bases of trust:</i> institutional-based characteristic-based process-based		Formal law Socialisation Personal reputation	Case law Not relevant Personal reputation is not very relevant
	<i>Legitimacy of individualistic behaviour</i>		Low	High

+ = High degree of development, - = Low degree of development.

Source: Chapters 5 and 6

The influence of the nationally distinct social institutions in the UK and Dutch potato industries is reflected by the patterns of inter-firm cooperation. These patterns turned out



to be each other's opposites. Bilateral forms of inter-firm cooperation are remarkably more developed in the Netherlands than in the UK. In the Dutch potato industry, transactions tend to be 'embedded' in informal long-term inter-firm relations. In the UK, relations generally last as long as the formal contracts of the parties involved. A similar view is reflected by the relative importance of trade associations, which are strongly developed in the Dutch potato industry but are rather weak and fragmented in the UK. However, the industry association that succeeded the semi-governmental Potato Marketing Board in the UK appeared much more active and relevant to firms than its Dutch counterpart which has been virtually pushed aside by strongly developed trade associations. Put briefly, the results of this study show that the Dutch and UK potato industries constitute two considerably different systems of inter-firm organization. Figure 7.1 provides a condensed overview of the research results.

### 7.1.2 Answers to the central research question

The upshot of this study enables the formulation of answers to the central research question:

*What is the influence of key social institutions on the development of cooperative inter-firm relations?*

It has been found that firms are embedded in national contexts which are comprised of a range of distinct social institutions that either facilitate or hinder the development of different forms of inter-firm cooperation. The empirical findings about the UK and Dutch potato industries show that the combined influence of nationally distinct key social institutions strongly facilitate the development of cooperative inter-firm relations in the Netherlands and adverse inter-firm relations in the UK. In the Dutch potato industry, the combination of a facilitating state, a credit-based financial system, a legal system based on formal law, the relevance of social obligations, and personal reputation, and a low legitimacy of individualistic behavior was found to facilitate the development of cooperative arrangements between firms. In contrast, it was found that in the UK potato industry the combined influence of a regulating state (*laissez-faire* since 1997), a capital-based financial system, a legal system based on case-law, a low relevance of personal reputation and social obligations, and a high legitimacy of pursuing self-interest was found to hinder the development of cooperative inter-firm relations. In short, the empirical evidence found in this study underpins the conclusion that the



relative ease of developing cooperative inter-firm relations varies with the nationally distinct nature of a range of key social institutions.

## 7.2 Practical implications

### 7.2.1 General implications for management

As was pointed out in Chapters 1 and 2, inter-firm cooperation can be regarded as a critical managerial issue as it closely connects with competitive strength (see also Van den Bosch 1998: 15-17). More particularly, firms that operate in dynamic markets can gain greatly from durable forms of cooperation that enable them to meet requests from customers such as speed of delivery, punctuality, product quality, and innovation. This view is strongly supported by the outcomes of the present study on the UK and Dutch potato industries. The degree of both vertical and horizontal inter-firm cooperation among Dutch potato firms is very high and is widely seen as an important basis for the considerable international competitive strength of this industry<sup>1</sup>. By contrast, cooperation is not really a strong feature of UK potato firms. The international market position of the UK potato industry is not very strong as well. Even more illustrative in this respect is that, at present, some Dutch potato firms have a quite strong presence in certain segments of the UK potato market, whereas very few UK potato firms have a foothold in the Netherlands.

It has been shown that the institutional contexts of geographically proximate countries such as the UK and the Netherlands accommodate very different systems of inter-firm organization. In other words, the nature of social institutions that either hinder or facilitate inter-firm cooperation tends to vary between countries. Put in strategic management terms, this implies that firms are likely to gain from a high degree of 'fit' between their inter-organizational relations and the institutional environment, both in domestic and overseas markets<sup>2</sup>. With this observation in mind, three different managerial actions can be distinguished to maintain or improve the 'institutional fit' of inter-firm relations. First of all, management will gain from taking into account the fit between the institutional environment and the way their inter-firm relations are

<sup>1</sup> This view is among others supported by British and Australian scholars who were involved in comparative analysis of aspects of the Dutch potato industry with its British counterpart (see Lamont 1992; Martin and Hughes 1992; Schroder 1993).

<sup>2</sup> The underlying assumption is that divergent organizational behavior may lead to difficulties in inter-firm relations, which, in turn, have a negative impact on competitive strength.

organized when strategic analysis of the strengths and weaknesses of their organization are made. In this way, possible frictions between institutional pressures and organizational features of the firm are identified and, if considered necessary, appropriate measures can be taken.

Secondly, management is likely to gain from similar analysis prior to investments that involve the establishment of inter-firm relations in overseas markets. International alliances are notorious for their high failure rates. Institutional analyses prior to the development of such collaborative arrangements produce important knowledge that is needed to guide such processes as it reduces the risk of failure due to misunderstandings or miscalculations based on wrong assumptions about the future behavior of the other party.

Thirdly, management can improve the competitive position of their firm by actively influencing the nature of 'proximate' key social institutions in their industry. Through lobbying, consultation, and initiatives for self-administration/regulation firms, groups of firms or entire industries have the ability to influence the degree and mode of state intervention. In fact, this happened in both the UK and Dutch potato industries. In the Netherlands, potato firms jointly avoided far-reaching state intervention in their industry through consultative relations and self-regulation (Van den Bosch and Veerman 1983). In the UK, particular potato firms and retail organizations were successful in their lobby to abandon the market regime for potatoes. In a similar fashion, firms may bring about changes in laws and regulations that affect their industry or, particularly, the way transactions can be managed. Moreover, in countries with 'dual' financial systems such as the Netherlands, firms have the option to choose between either stock capital or long-term loans to fill their capital needs. This choice allows management to deliberately influence the length of their time horizons with regard to investments in, among others, cooperative inter-firm relations.

### **7.2.2 Implications for firms in the agri-food industry**

Apart from the general implications for management addressed in the section above, remarks can be made that are relevant to the agri-food industry in general and more in particular to firms in the UK and Dutch potato industries. First of all, the consequences of changing key social institutions for firms in the agri-food industry will be discussed. Secondly, the obstacles and advantages that come with the nationally distinct market organization of the UK and Dutch potato industries will be discussed in the light of the



need for suitable responses to the current fundamental shifts in their business environment.

### *A changing institutional environment*

The nature of the key social institutions that have been discussed in the present study tends to be fairly stable. Nevertheless, this nature can change either gradually or suddenly. The UK potato industry witnessed a dramatic shift in the nature of state involvement in 1997 (see Chapter 6). The market regime for potatoes was abandoned and replaced by a laissez-faire policy, although some governmental research funding remained. In short, the UK potato industry has become exposed to international market forces, which are not or slightly moderated by structuring influences of national social institutions. Moreover, the industry is going through a process of restructuring in which larger firms become larger and smaller firms gradually disappear from the scene.

Shifts in the nature of key social institutions are also underway within the Dutch agribusiness, including the potato industry. These shifts are even wider in scope and more salient than in the UK. For almost the entire 20<sup>th</sup> century, the economic organization of the Dutch agribusiness sector has been considerably distinct in nature with respect to most other Dutch economic sectors. This was largely due to the sector-specific nature of key social institutions including a strongly facilitating state involvement in the agribusiness, a credit-based financial system, and a high legitimacy of collectivistic behavior (see Chapter 6). However, the nature of the social institutions has begun to change considerably. In other words, the (institutional) rules of the game are changing, which urges management of agribusiness firms to revise their strategies and structures. What are the shifts and developments in the institutional environment of the Dutch agribusiness, and what does this mean for the firms involved?

CHANGING STATE INVOLVEMENT: Since the 'purple' coalition<sup>3</sup> came into power in Dutch government at the expense of the confessional parties in the early 1990s, the political influence of the 'green front' (i.e., the strong agribusiness lobby) has corroded considerably. In tune with this, state involvement in the agribusiness has started to change fundamentally. The facilitating behavior of the Dutch government is more and more replaced by a laissez-faire policy, implying that firms are increasingly left to their

<sup>3</sup> The 'purple' coalition is comprised of three political parties: PvdA (socialists), VVD (liberal) and D'66 (democrats). The party of the Christian democrats (CDA), which has been part of most coalitions that formed the Dutch a government since W.W. II, was left out.



own devices. Moreover, regulations that have an impact on the industry are more and more developed in 'Brussels,' rather than by national governments. Consultation with government officials seems to be replaced by lobbying at the agencies of the EU. In addition, EU regulations that foster an increase of free market competition are being applied with greater consistency. As a result, firms are left with more uncertainties about policies that have an impact on their business operations and are confronted with limitations to their possibilities of self-administration. What is even more relevant for Dutch agribusiness firms to take into account is that the substantial governmental funding of research, development, and education is decreasing at a rapid pace. This can be considered a serious threat to -particularly- small and medium-sized agribusiness firms that have limited resources for research and development. Given the high importance of knowledge and innovation as success factors in present-day competition, agribusiness firms must be quick to find ways to pool their resources to avoid a decrease of research efforts as a result of the withdrawal of government funds. Moreover, fragmentation of research and development activities will prove to be devastating for the unique and extensive knowledge infrastructure that underpins much of the past and present successes of Dutch agribusiness. Corrosion of this infrastructure will irreversibly harm the leading competitive position of many Dutch firms in international agribusiness markets in the long run, because much of their competitive advantage is knowledge-based. In particular, firms with limited access to investment capital run the risk of being outperformed by the highly self-sufficient multinational companies that have substantial resources for research and development, which enable them to launch new products and services at a high pace.

**A CHANGING FINANCIAL SYSTEM:** The mutually reinforcing nature of social institutions is reflected in the apparent change in the nature of the financial system in Dutch agribusiness. Shifts in this system can be linked at least in part to the changes in the state involvement in the industry. The decline of state support to the agribusiness on both national and EU levels implies greater risks for the banks that have high stakes in this particular sector of the economy. Illustrative in this respect is that Rabobank, the most important bank in the Dutch agribusiness sector, has started to shift part of its focus towards other markets. As the risks of capital provision increase, access to capital by agribusiness firms is likely to become more difficult than before due to more stringent conditions of the banks. Moreover, publicly listed banks are becoming more active in the agribusiness sector, which makes it likely that short-term returns on loans

will get a higher priority. The changing nature of the financial system has also consequences for firms that seek to expand their operations and that want to enhance their research efforts in response to the pressures of increasing international competition. These firms may be tempted to look for other sources than bank loans to fill their capital needs. Moreover, the co-operatives, which dominate in many sectors of the Dutch agribusiness, are pressed to reconsider and adjust their governance structures in order to be able to attract external capital they need for future investments.

**CHANGING BASES OF TRUST:** The bases of trust underlying the exchange relations in the Dutch (but also the UK) agribusiness are becoming increasingly dominated by formal contracts. This is due to the increasing size of transactions between firms (embodying greater risks) the alienation process between firms that grow larger while the farmers that supply them remain relatively small, and the increase of guarantees for food safety required by major customers. If the issue of trust is looked upon from an international perspective, it can be stated that firms with cross-border activities will continue to be confronted with a variety of ways to build trust in different countries because different types of contract law exist in different national contexts. Given the inherent uncertainties that come with the use of formal contracts in international markets, process-based trust is likely to remain important.

**THE DECLINE OF COLLECTIVISTIC BEHAVIOR:** The general trend of the increasing individualization of society is also present in the agribusiness. In particular the Dutch co-operatives are affected by this development. The behavior of the members of co-operatives in the agribusiness is becoming more individualistic in nature (see, e.g., Veerman 1998: 75). As a result, managers of co-operatives are confronted with growing tensions between the original foundations of their organization, i.e., solidarity, pressures for more rapid responses to market developments, and the demands of the members that put more emphasis on their individual –and often short-term– interests. This development calls for organizational solutions that deal effectively with the increasing tension between the long-term interests of the co-operative and the individual preferences of its members. This is necessary to keep co-operatives viable forms of economic organization. However, if management and the members of co-operatives are not able to develop new governance structures that enable their organization to operate decisively in increasingly competitive markets, private firms are likely to take over as a dominant form of organization in the Dutch agribusiness.



It has been argued that the nature of nationally distinct social institutions in the UK and Dutch agribusiness is changing and that firms need to respond to survive this transition process. In the Netherlands, the institutional environment is becoming much less supportive of, or even hostile to, many of the (collaborative) organizational structures that have developed and functioned in the agribusiness for many decades. Co-operatives and industry associations can be seen as examples of this. In short, firms in the Dutch agribusiness are challenged to cope in an environment that is becoming considerably less facilitating to the development of inter-firm cooperation, while, paradoxically, the importance of strategic inter-firm cooperation increases.

#### *Structural change in the UK and Dutch potato industries*

Similar to other industries such as car manufacturing, publishing, oil, and transportation, the agri-food industry is becoming more and more dominated by large multinational companies (MNCs) that operate on a global scale and which grow ever larger in an ongoing process of takeovers and mergers. The accelerating internationalization and concentration processes driven by the mergers and takeovers of large European and American food retail corporations (such as Royal Ahold, Carrefour, Wal-Mart, and Tesco) lead to a redefinition of the rules of competition in the agri-food industry. The suppliers of food products are becoming confronted with fewer and larger customers that operate in international markets. The demands of these large food retail corporations are changing in accordance to this situation. Concepts such as 'preferred suppliers' and 'global sourcing' are being applied and developed to exploit cross-border economies of scale, while local tastes need to be taken into account as well. This pushes firms to invest heavily in the development of knowledge, processes, services, products, and sufficient production capacity to meet the needs of their fewer but larger customers. In short, this means that the suppliers of large food retailers and other MNCs in the agri-food industry are being challenged to grow along with their major customers or to become niche market players. Firms that follow neither of these generic strategies are very likely to be reduced to marginal players with unfavorable future prospects, such as being taken over or disappearing from the scene in the long run. How do these strategic developments relate to the research findings?

THE UK POTATO INDUSTRY: With respect to the fundamental and rapid industry-wide restructuring called for by the developments sketched above, the UK potato industry seems to have an advantage over its Dutch counterpart. After abandoning the market



regulations for potatoes in the UK, the restructuring process accelerated. This could happen because the national system of key social institutions legitimizes -and certainly not inhibit- that dominant firms such as large retailers and processors restructure the potato industry in a way that best fits their interests (see Chapter 6). In the short run, this is an unfavorable scenario for many small and medium-sized firms that may not find ways to grow rapidly or bundle their strengths in highly cohesive networks. However, for the long run, this process is likely to yield a potato supply system comprised of a limited number of large and highly competitive potato firms that are able to cope with the demands of international MNC-dominated competition. In other words, the low degree of market organization in the UK enables rapid and fundamental restructuring that is directed by MNCs. This, in turn, is likely to lead to the development of large and internationally competitive potato firms. As a next step, it is not unthinkable that these firms will expand internationally. Owing to their large size and access to stock capital for investments and takeovers, they may become tough competitors of other European firms, including Dutch ones.

**THE DUTCH POTATO INDUSTRY** The Dutch potato industry has witnessed an ongoing restructuring process for more than a decade. However, apart from a few mergers and increasing concentration levels, this process has not led to changes that equal the impact of the large-scale mechanization that enhanced the competitiveness of the Dutch potato industry in the 1960s and 1970s (see Chapter 5). The present pressures for growth and internationalization are another important and durable source of competitive strength for the Dutch potato industry, but they also seem to endanger the future competitiveness of particularly the medium-sized and small firms. On the one hand, the widespread capabilities of Dutch potato firms to cooperate with strategically important partners facilitate joint product development, increased efficiency, and the development of advanced supply chain services to major customers (Chapter 5). On the other hand, the highly structured national business environment of Dutch potato firms, as is described in Chapter 6, seems to impede possibilities of gaining a critical size with respect to large multinational companies. The major possibility for rapid growth for Dutch firms is through mergers. This is due to the saturation of the domestic market and the limited access of many firms (and in particular co-operatives) to capital for takeovers or autonomous growth. However, owing to the (still) supportive institutional environment for inter-firm cooperation, Dutch potato companies relatively easily engage into collaborative arrangements to obtain access to strategically important assets such as, for

instance, monopolized potato varieties. In this way, firms are tempted to not only nurture their autonomy – but they also remain small. This ‘recipe’ may have worked for decades. However, given the present ‘small firm squeeze’ that is going on in a less and less supportive institutional environment, it does expose small and medium-sized firms to the danger of becoming marginal players with respect to large and internationally operating (and expanding) customers and competitors. In fact, to remain competitive in the long run, Dutch potato firms need to get the best of both worlds. They certainly should take advantage of their capabilities of inter-firm co-operation. At the same time, however, they should try to develop themselves into larger entities that are able to meet the demands of an industry, which is rapidly becoming dominated by large multinational companies.

### **7.2.3 Implications for business associations**

It has been shown that business associations are forms of joint action that enable firms to expand their influence over their business environment. For instance, business associations were instrumental to Dutch potato firms in preventing the government from imposing regulations on their industry shortly after W.W. II. Moreover, the establishment of joint promotion, quality standards, and control systems through business associations has contributed to the export success of Dutch potato firms. In the UK, trade associations of potato processors have supported the lobby that eventually led to the abandoning of the market regime in their domestic market, which helped to increase their control over their supplies. In this respect, it was interesting to see that some multinational companies were able to enhance their position in foreign markets through their membership of national business associations.

The relevance of national business associations is challenged by decreasing numbers of members due to ongoing concentration in the industry, more stringent competition regulations, the increased ability of large firms to promote their interests at national and EU levels, and the decreased need for collective promotion. Moreover, policy development increasingly happens at European or global levels and the building of trust between business partners more and more occurs between different countries, rather than within national borders. As a result, the need of firms to control parts of their business environment through business associations is shifting from a national level to European and global levels. These developments push national business associations to develop new functions for their members. Moreover, competition may be evoked



between different national business associations because they will increasingly compete for influence over important international policies and regulations. However, there is also a growing need for mutual cooperation between national business associations. Cooperation is particularly needed to gain the critical mass that is required to influence the political developments in the international business environment that affect their members. In addition to this, business associations with international membership and scope are likely to increase in importance. This is very similar to structural developments among business associations earlier this century, when regionally operating business associations were replaced by organizations that operated on a national level.

Despite this dark scenario for national business associations, there are also possibilities to increase their relevance to the industry. For instance, given the developments in the Dutch agribusiness, business associations can increase their relevance through assuming or extending their role in the initiation and coordination of jointly funded research. In this way, they would help keeping the knowledge infrastructure of the industry alive and productive. Moreover, they would avoid a harmful fragmentation of the industry and a less efficient use of resources.

#### **7.2.4 Implications for governmental policies**

The results from the analysis in Chapter 6 support the fact that the nature and degree of state involvement in the industry does strongly influence the way firms coordinate and control their inter-firm relations. Moreover, it has been shown that state behavior with regard to the industry can also vary greatly. It has been indicated that both state-imposed market regimes and laissez-faire state behavior (found in the UK) hamper initiatives of firms to develop cooperative relations with each other. In contrast, facilitating behavior comprised of substantial investments in knowledge generation and dissemination, consultative state-business relations, and allowing for high degrees of self-regulation through voluntary business associations (found in the Netherlands) encourages inter-firm cooperation. Seen against this background, it is argued that industry development benefits from inter-firm cooperation (cf. Best 1990; Schmitz 1996; Humphrey and Schmitz 1998) and that governments can contribute to higher degrees of collaboration within and across industrial sectors (Hollingsworth et al. 1994). Except for large multinationals, the costs and risks of knowledge creation as well as product and process innovation increasingly exceed the capacity and capabilities of individual firms. As a



result, small and medium-sized firms, but also larger ones, are pressed to engage in arrangements of coordinated specialization to be able to meet increasing competitive pressures. This is particularly true for the agri-food industry where many small and medium-sized firms are active. These firms are confronted with increased international competition, higher customer demands, shortening product life cycles, high efficiency demands, and increasing degrees of knowledge intensity of products, services, and processes. Governments that intend to support the enhancement of the competitive power of small and medium-sized firms confronted with such demands may look at the (past) relations between the state and the highly competitive Dutch potato industry for inspiration. Forms of state involvement which encourage (or sometimes push) firms to undertake joint initiatives to develop the industry seem to work remarkably well. This differs greatly from state regulation via market regimes, which discourage bottom-up initiatives, or laissez-faire state behavior that evokes adverse competition between firms.

### 7.3 Theoretical implications

#### 7.3.1 Institutions and economic organization

In Chapter 6 the propositions, which were deduced from the analytic framework, have been confronted with the empirical findings. Moreover, the in-depth analysis of the potato industries in the two countries have generated detailed insights in how the firms involved tend to organize their relations with other companies. In this manner, the comparative case study of the UK and Dutch potato industries has contributed to our understanding of the influence of nationally distinct institutional environments on the development of cooperative inter-firm relations (see Section 7.1). This adds to the accumulating body of literature about the institutional embeddedness of forms of economic organization (see Chapters 1 and 3).

What is more interesting here is that the results of this study also demonstrate that the nature and influence of key social institutions can differ considerably from industry to industry *within* a country (see Chapter 6). Inter-organizational arrangements are likely to vary accordingly<sup>4</sup>. In other words, the nature of the same types of social institutions can

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<sup>4</sup> In this light it is relevant to refer to a remark in a 1990 policy report (Nota) about the strengths and weaknesses of the Dutch economy, which was written on behalf of the Dutch government. In this report, it was stated that '*In general, cooperation is not a very strongly developed characteristic of our (i.e. the Dutch) business culture.*' This is diametrically opposing the findings about the potato industry, which apparently has different organizational features in comparison with many other industries in the

vary considerably across different industries that are located in a single country. Indeed, the nature of key social institutions including state involvement in the industry, the financial system and the legitimacy of individualistic behavior appeared to be specific to the Dutch potato industry. Moreover, the market regime for potatoes in the UK before 1997, which had lasted for decades, contrasted sharply with the laissez-faire policy of the British government with regard to most other industries. These findings of this study add to the observations made by other authors about institutional heterogeneity between industries. However, the present findings are different from the observations by Herrigel (1996) who investigated the co-existence of different *regional* institutional systems in Germany. These differences appeared to be based on variations in institutional frameworks across the 'Ländern' that make up Germany. In addition, Hollingsworth et al. (1994: 8) argued that different industries (or sectors) represent different institutional legacies and that forms of economic organization differ accordingly. They have shown that different industries in different countries constitute different modes of economic governance. However, they provided no empirical evidence about the co-existence of key social institutions that are *different* in nature with respect to different industrial sectors within single countries. Nevertheless, their argument that capitalism can no longer be studied as a whole, but that it must be broken down into parts at an industry level, is fully endorsed by the findings of the present study. This is not to say that studies of general patterns of economic organization on a national level, which is central to the 'National Business Systems' discourse (see, among others, Whitley and his associates 1990 - 1999), should be rejected. Rather, the results of this study point out that the nature of inter-organizational systems within different industries may vary vis-à-vis broad patterns of economic organization on a national level.

### 7.3.2 Limitations of the research project

The research design and the conceptual framework used in the present study bring about inevitable limitations. With regard to the external validity of the findings, it remains difficult to say to what extent the results can be generalized to other sectors of the agri-food industry (that either are or are not subject to a market regime), let alone sectors in the manufacturing and services industries. Moreover, because of the vast complexity of the subject investigated and the conceptual scope of this study, the explanations that have been offered for the findings are regarded largely tentative in nature (cf. Lane

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Dutch economy. Source: Nota 'Economie met Open Grenzen', Vergaderjaar 1989-1990, 21.670, Nrs. 1-2, Den Haag: Tweede Kamer der Staten Generaal, page 10.



1995: 2). For instance, it is not supposed that the range of key attributes that have been identified to capture patterns of inter-firm cooperation on industry level is inclusive. It is likely that in the future relevant attributes are added and others altered. Nevertheless, the attributes used in the field study are considered at least adequate to achieve a broad view of the way firms coordinate and control their inter-firm relations and should certainly prove to be useful in future research.

It should be noted as well that the analyses in this study have been focused on the combined impact of a limited range of key social institutions that influence the development of cooperative inter-firm relations (see Chapters 5 and 6). It may be that 'shaping factors' for inter-firm cooperation have been overlooked or disregarded because of the necessarily limited scope of the research. For instance, it is by no means certain that the set of key social institutions incorporated in the analytic framework is sufficient to account for patterns of inter-firm organization in other industries. In addition, although industry-specific variables were kept constant to a large extent by comparing same industries across different countries, the 'national' cases are not likely to be entirely congruent in this respect. This implies that the results have been biased to some extent by incidents and idiosyncrasies of the firms/industries involved in this study.

Another limitation of this study is that the combined influence of social institutions has been analyzed, but the possible mutual influence between them has remained rather indefinite. Moreover, apart from the development of industry associations, it has not become clear if perhaps one or more social institutions dominate others with regard to their influence on the development of forms of inter-firm organization<sup>5</sup>. Finally, light has been shed on the direct or indirect influence of nationally distinct social institutions on the development of inter-firm relations. However, the design of this study did not allow obtaining a sharp view of micro-level processes. Rather, a synchronic analysis was made of the situation in the potato industries in both countries in the last half of the 1990s. Hence, it has not been ascertained in great detail how key social institutions have channeled and constrained the actions of management that led to the development of the forms of inter-firm cooperation found in the UK and Dutch potato industries. To gain more insights into this matter, future research is needed which combines longitudinal micro-, meso-, and macro-level analyses of economic organization processes. In the next section more attention will be paid to possible directions for future research.

<sup>5</sup> See Rademakers (1998) for an example about the influence of the state over the financial system and how this influences the development of inter-firm relations.



### 7.3.3 An agenda for future research

The outcomes of the present study have not only delivered new insights, but have also given rise to many more questions pertaining to the social construction of forms of inter-firm organization. Subjects that call for more attention are (1) the expansion of the research database; (2) the extension of the analytic framework; (3) the interaction between trust, power, inter-firm relations, and institutions; (4) the process dimension of inter-organizational development under the influence of key social institutions; and (5) the role of nationally distinct institutions on the development of inter/intra-firm cooperative arrangements of multinationals. Below, these subjects will be discussed in more detail.

#### *Expansion of the research database*

- In Chapter 6 the research findings have been fed back to the propositions formulated in Chapter 3. It turned out that the cases involved in this study revealed mutually reinforcing combinations of key social institutions. This implies that there is limited empirical evidence to test the propositions about the development of cooperative inter-firm relations in institutional environments where not all of the key social institutions reinforce each other. Hence, future research involving less cohesive institutional environments is called for to gain empirical evidence that can be used to support or reject these propositions.
- Stronger empirical evidence about the influence of social institutions on the development of cooperative inter-firm relations can be gained by expanding this line of research to more industries in different countries. In addition, more elaborate and extensive research methods may be applied, such as case studies designed according to the two-sided comparative method (Ragin 1989). Such research would require an examination of inter-firm organization in same industries that are located in three different countries, comprised of two similar and one dissimilar type of institutional environment (see, for instance, Djelic 1998: 15). For instance, concerning the potato industry, such research would include the Netherlands and most likely Germany as similar cases, and the UK as the dissimilar one.

#### *Extension of the analytic framework*

- Are there other nationally distinct social institutions that have a significant influence on how managers shape inter-firm relations? This question calls for further refinements of the analytic framework that was built for the present study. For example, during the field research it was noted that job mobility among the managers

in the UK tends to be higher than in the Netherlands. Therefore, the employment system may be considered to be an additional institutional influence on the development of cooperative inter-firm relations (cf. Lane 1996). Indeed, high job mobility is likely to hamper the development of long-term relations between firms as they are based on relations between people. However, more research is needed to find out to what extent this influences cooperative inter-firm behavior in combination with other institutional factors and other aspects, such as the stability of ownership (cf. Franks and Mayer 1990).

- A more complete view of how inter-firm relations are developed calls for research that combines analyses of inter-organizational structures in their institutional context with other aspects of economic organization such as ownership structures and authority relations (cf. Whitley 1992b). An extension of the present findings with additional research into the features of intra-firm organization in the UK and Dutch potato industries would be very useful for such purposes. Concepts for the analytic framework needed for such an endeavor could be drawn from the business systems framework (see Chapter 3). Such research may, for instance, reveal possible variations in the capabilities of cooperation between private firms (prevailing in the UK) and co-operatives (which dominate the Dutch potato industry).

#### *Trust, power, inter-firm relations, and social institutions*

- During the field research and the subsequent analysis of the data it became evident that in the UK, large firms with considerable market power tend to perceive the nature of their inter-firm relations as more cooperative than the smaller ones. A possible explanation is that large firms are in the position to determine the 'rules of the game' in the industry, and that the managers of the large enterprises see the compliance of the smaller firms to these rules as cooperative behavior. However, in the Netherlands such an effect was not detected. Future research is needed to find out to what degree managerial perceptions of cooperative behavior are influenced by the market power of their firms, and what the role of the institutional environment is in this matter.
- The results of the present study indicated, among other things, that business associations can play an important facilitating role in processes of socialization and reputation building. Future research is called for to gain more detailed knowledge



about the role of business associations as vehicles for the production of trust between firms and under which circumstances they are likely to perform such a function.

#### *The process dimension of inter-organizational development*

- What exactly is the influence of social institutions on managerial processes involved in the development of inter-firm relations? As was pointed out above, future research is needed to gain insights into the micro-level *processes* involved in the development of inter-firm relations under the influence of social institutions. Central to such research are the managerial perceptions about the direct or indirect influence of key social institutions. The assumption underlying such research is that managerial perceptions guide managerial actions that lead to the development of new or revised organizational structures in response to changes in the institutional environment.

#### *Multinationals and inter/intra-firm cooperation*

- Given the nationally distinct forms of inter-firm organization that have been found in the present study, the question can be raised as to how multinationals deal with this matter and how this relates to their international performance. Answers to this question can be found through research on the organizational behavior of multinationals and the national systems of inter-firm organization in the countries where they operate. In this way, insights are gained into the relative success of the strategies of multinational firms concerning the way they deal with variations in institutional pressures<sup>6</sup>.
- Various authors have observed that large firms, including internationally operating corporations and co-operatives, are transforming themselves from hierarchical organizations into intra-firm networks. Examples are the 'federal organizations' constituted by IBM (Child and Faulkner 1998) and the 'internal network organization' of the Rabobank (Van Wijk and Van den Bosch 1999). The questions about different systems of inter-firm organization apply to a large extent to these intra-firm networks as well. For instance, are intra-firm networks of internationally

<sup>6</sup> Concerning the potato industry, research could involve large and well-established multinational firms such as Pepsico, Unilever, and Nestle, but also smaller and younger internationally operating firms such as McCain, Farm Frites, and Aviko.



operating firms organized along the lines of dominant forms of inter-firm organization in the domestic market of these organizations? Alternatively, are these intra-firm networks comprised of a range of autonomous business units in different countries that make use of nationally specific coordination and control systems?

Obviously, there is much work to be done to obtain a deeper understanding of the influence of nationally distinct social institutions on the development of forms of inter- and intra-firm cooperation.

#### 7.4 Concluding remarks

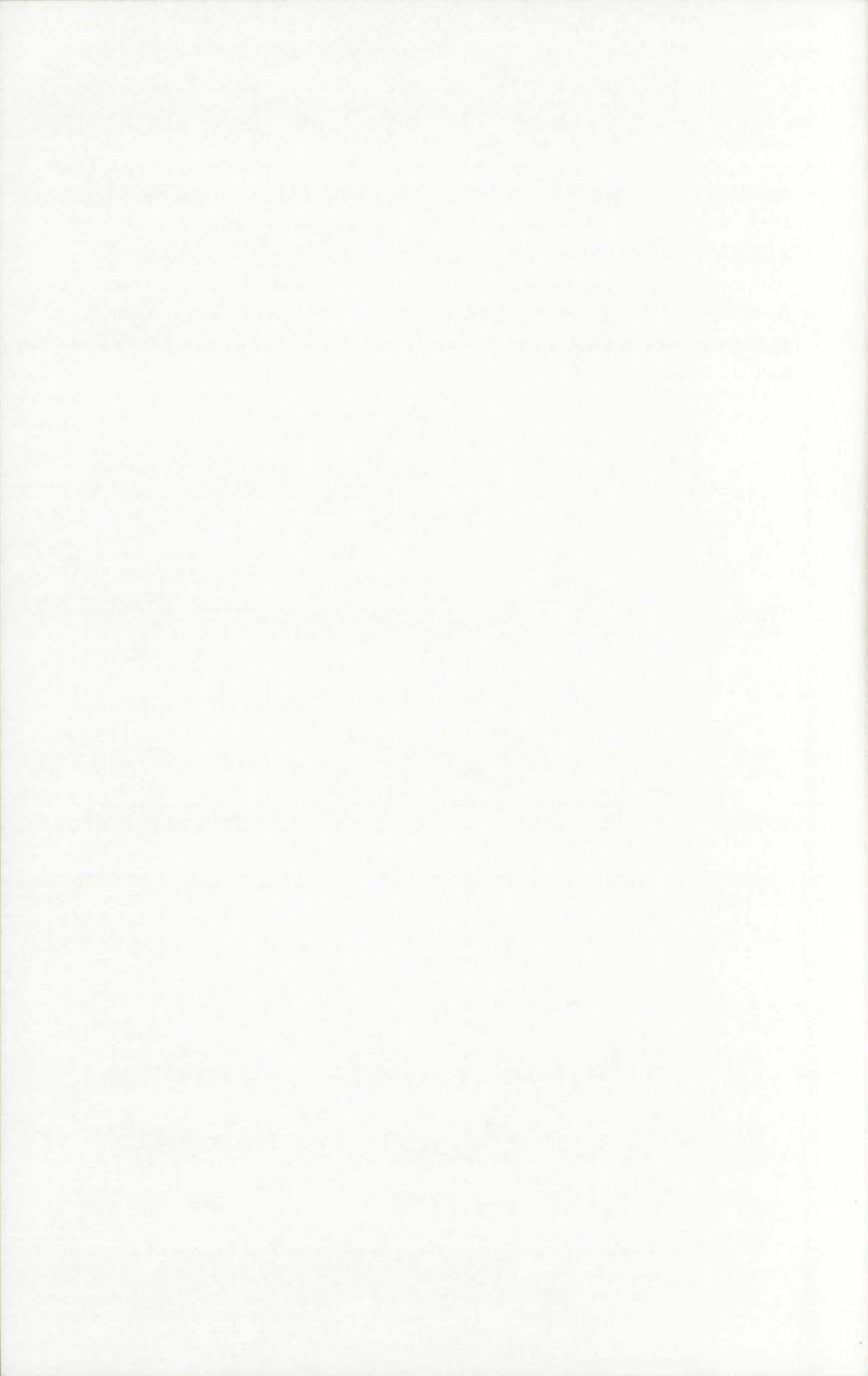
The cross-national comparison of forms of inter-firm cooperation in the UK and Dutch potato industries, embedded in their distinct national contexts, has uncovered sharply contrasting systems of inter-firm organization. The Dutch case displayed a system in which bilateral cooperative inter-firm relations as well as trade associations have developed considerably within a cohesive institutional environment encouraging inter-firm cooperation. By contrast, the UK case exhibited a system in which spot-market relations are more prevalent and horizontal cooperative inter-firm relations are much more weakly developed than in the Netherlands. The UK potato industry appeared to be embedded in an institutional environment encouraging self-sufficiency, short-term horizons, and the pursuit of self-interest.

Surprisingly, the industry association in the UK was found to be considerably more active and relevant than its counterpart in the Dutch potato industry. This finding has been accounted for by referring to the dominant role of the state in the UK potato industry (until the late 1990s) which has until recently supported this organization. In the Netherlands, by contrast, the strongly developed trade associations seem to have limited the relevance of the industry association.

Finally, with regard to the Dutch case, it has been revealed that within national economies markedly distinct forms of inter-firm organization can emerge under the influence of key social institutions that are industry-specific in nature.

This thesis has highlighted the influence of nationally distinct social institutions on the development of forms of inter-firm organization. The results indicate that, in spite of the globalization processes, it is likely that many nationally distinct systems of inter-firm cooperation are present in the free market economies around the world. This issue is

considered highly relevant to the strategic management of internationally operating firms. Indeed, firms increasingly depend on successful cooperative inter-firm arrangements in both domestic and cross-border markets to gain competitive strength. At the same time, there is, as yet, much uncharted water with regard to the 'institutional fit' of cooperative inter-firm arrangements. Obviously, this calls for future research on this topic, as well as efforts to derive practical implications for management from the body of knowledge in this field.





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the first of these is the fact that the first of the three is the only one which is not a member of the second class.

The second of these is the fact that the first of the three is the only one which is not a member of the second class.

The third of these is the fact that the first of the three is the only one which is not a member of the second class.

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The eleventh of these is the fact that the first of the three is the only one which is not a member of the second class.

The twelfth of these is the fact that the first of the three is the only one which is not a member of the second class.

The thirteenth of these is the fact that the first of the three is the only one which is not a member of the second class.

The fourteenth of these is the fact that the first of the three is the only one which is not a member of the second class.

The fifteenth of these is the fact that the first of the three is the only one which is not a member of the second class.

## **APPENDICES**





## Appendix I

Overview of the organizations involved in the explorative stage of the research project

### Explorative study ~ the Dutch potato industry

	Organization	No. of interviews	Located in	Organization type
1.	Agrico	2	Emmeloord	Firm (co-operative)
2.	Aviko	2	Steenderen	Firm (coop-owned)
3.	Cebeco-Handelsraad	1	Rotterdam	Firm (co-operative)
4.	Fruit Chips	1	's-Gravenpolder	Firm
5.	Landbouw-Economisch Instituut	2	Den Haag	Research Institute
6.	McCain NL	1	Hoofddorp	Firm
7.	Nedato	4*	Oud-Beijerland	Firm (coop-owned)
8.	NIVAA	1	Den Haag	Association
9.	Productschap Aardappelen	1	Den Haag	Association
10.	NVZP	1	Zeist	Association
11.	Rabobank	1	Utrecht	Firm (co-operative)
12.	VAVI	1	Den Haag	Association
13.	VBNA	2	Den Haag	Association
14.	PAGV	3	Lelystad	Research Institute
15.	CZAV	1*	Middelhamis	Firm (co-operative)
16.	ZPC	1	Leeuwarden	Firm (co-operative)

\* Interviews for an in-depth case study

### Explorative study ~ the UK potato industry

	Organization	No. of interviews	Located in	Organization type
1.	Potato Review (Journal)	1	Great Missenden	Firm
2.	Potato Products International	1*	USA	Firm
3.	Wye College/London University	1*	Wye	University
4.	University of Edinburgh/VTSC	1	Edinburgh	University/trd.ass.
5.	J.Taylor	1	Oxford	Consultant
6.	Agrico (export managers)	2	Emmeloord	Firm (co-operative)
7.	British Potato Council	1	Oxford	Association
8.	Potato Processors Association	1	London	Association
9.	Fresh Produce Consortium	1	London	Association
10.	National Joint Association of British Potato Merchants	1	Spalding	Association

\* Via internet/e-mail



## Appendix II

The selection of UK and Dutch firms: their activities and core business

Dutch firms	Activities in the potato industry supply chain											
	Breed- ing		Seed potato growing		Seed potato trade		Ware potato growing		Ware potato trade / pre- packing		Potato processing	
	●	θ	●	θ	●	θ	●	θ	●	θ	●	θ
1.	x				x				x			
2.											x	
3.		x			x				x			
4.											x	
5.	x				x							
6.					x				x		x	
7.							x		x		x	
8.	x				x				x		x	
9.									x			
10.	x				x				x		x	
11.		x			x				x		x	
12.	x				x				x			

● = Involved in this activity, 100% ownership

θ = Involved in this activity, partial ownership

x **Bold** = Core business



## APPENDIX II CONTINUED

UK firms	Activities in the potato industry supply chain											
	Breeding			Seed potato growing			Seed potato trade			Ware potato growing		
	●	θ		●	θ		●	θ		●	θ	
1.		x					x				x	
2.		x		x			x					
3.							x					
4.												x
5.		x						x			x	
6.												x
7.							x				x	
8.												x
9.		x		x			x					
10.							x					
11.												x
12.		x			x		x			x		
13.	x			x			x		x		x	
14.	x						x					
15.							x					
16.		x		x			x					
17.		x						x		x		

● = Involved in this activity, 100% ownership

θ = Involved in this activity, partial ownership

x **Bold** = Core business

### Appendix III

The firms, their locations, and the interview types involved in the comparative analysis of inter-firm relations in the UK and Dutch potato industry

#### Firms in the Netherlands

	Firm	Location	Interview type
1.	Agrico (NL)	Emmeloord	↻
2.	Aviko (NL)	Steenderen	↻
3.	Eriva	Zeewolde	☎
4.	Farm Frites (NL)	Oudendoorn	↻
5.	Hettema	Emmeloord	↻
6.	Koval	Ittervoort	☎
7.	McCain Foods (NL)	Hoofddorp	☎, ↻
8.	Lamb-Weston/Meijer (NL)	Kruiningen	↻
9.	Nedato	Oud-Beijerland	☎, ↻
10.	Schaap	Biddinghuizen	☎
11.	Van Rijn	's-Gravenzande	↻
12.	ZPC	Leeuwarden	↻

↻ = Face-to-face interview

☎ = Telephone interview

## APPENDIX III CONTINUED

## Firms in the United Kingdom

	Firm	Location	Interview type
1.	Anglian Produce	Loddon	↻
2.	Aberdeen Seed Potato Org.	Aberdeen	☎
3.	Baxter Avey	Castor	↻
4.	Bird's Eye Walls	Lowestoft	↻
5.	Branston Potatoes	Branston	↻
6.	Esk Frozen Foods	Montrose	☎
7.	Fenmarc Produce	March	↻
8.	Fisher Frozen Foods	Kings Lynn	☎
9.	Gordon & Innes	Alves	↻
10.	Horberry & Baker	Haxey	↻
11.	Idwal Fisher	Bradford	☎
12.	MBM Produce	March	☎
13.	McCain GB	Scarborough	↻
14.	PBI Cambridge	Cambridge	↻
15.	R&P Baker	Norfolk	↻
16.	Smillie Ltd	Perth	☎
17.	Worth & Co	Fleet	↻

↻ = Face-to-face interview

☎ = Telephone interview



## Appendix IV

The selection of business associations in the UK and Dutch potato industry: locations and interview types.

Dutch Business associations		Location	Interview type
1.	Commissie Aardappelen (CA) => <i>industry association</i>	The Hague	↻
2.	Nederlandse Federatie Pootaardappelen (NFP) => <i>trade association</i>	The Hague	↻
3.	Vereeniging ter Behartiging van den Nederlandschen Aardappelhandel (VBNA) => <i>trade association</i>	The Hague	↻
4.	Vereniging voor de Aardappel Verwerkende Industrie (VAVI) => <i>trade association</i>	The Hague	↻

UK Business associations		Location	Interview type
1.	British Potato Council (BPC) => <i>industry association</i>	Oxford	↻
2.	National Association of Seed Potato Merchants (NASPM) => <i>trade association</i>	Ipswich	☎
3.	Scottish Potato Trade Association (SPTA) => <i>trade association</i>	Perth	☎
4.	Potato Processors Association (PPA) => <i>trade association</i>	London	↻

↻ = Face-to-face interview

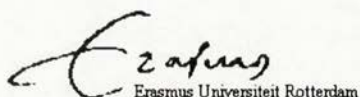
☎ = Telephone interview



## Appendix V

Interview protocol for firms (English version)

**Interview protocol  
#  
Firms in the UK Potato Industry**



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**Name of the organisation** .....

**Name of the respondent** .....

**Date of the interview** .....



## **I Level of vertical integration**

1. In which stage(s) of the potato supply chain does your firm operate?

Please tic [✓]

### **Breeding**

- ☐ not relevant
- ☐ activity 100% owned
- ☐ activity partially owned

### **Seed potato growing**

- ☐ not relevant
- ☐ activity 100% owned
- ☐ activity partially owned

### **Seed potato trade**

- ☐ not relevant
- ☐ activity 100% owned
- ☐ activity partially owned

### **Ware potato growing**

- ☐ not relevant
- ☐ activity 100% owned
- ☐ activity partially owned

### **Ware potato packing and/or trade**

- ☐ not relevant
- ☐ activity 100% owned
- ☐ activity partially owned

### **Potato processing (pre-fried products)**

- ☐ not relevant
- ☐ activity 100% owned
- ☐ activity partially owned

## II The nature of inter-firm relations

### EXPLANATION

On the next page(s) you will be asked to typify the nature of the buyer-supplier relations of your firm by making use of the following continuum:

**spot-market relations**    ☐    ☐    ☐    ☐    **co-operative relations**

#### Characteristics of spot-market relations

1. Information exchange limited to price, quality, and quantity
2. No exchange of knowledge
3. Relations based on formal contracts
4. Short-term relations: limited to a single transaction/season;
5. The price and quality are the major selection criteria for buyers/suppliers

#### Characteristics of co-operative relations

1. Information exchange, going beyond transactional information
2. Exchange of knowledge
3. Relations largely based on trust
4. Long-term relations: time periods of more than 3 years
5. Risk sharing (e.g., joint investments, joint operations, and/or joint R&D projects).

#### Examples:

<b>spot-market relations</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>co-operative relations</b>	⇒	The buyer-supplier relation is spot-market in nature
<b>spot-market relations</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>co-operative relations</b>	⇒	The buyer-supplier relation is <i>mainly</i> spot-market in nature but has co-operative features too
<b>spot-market relations</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>co-operative relations</b>	⇒	The buyer-supplier relation is <i>mainly</i> co-operative in nature but has spot-market features too
<b>spot-market relations</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>co-operative relations</b>	⇒	The buyer-supplier relation is co-operative in nature

# BUYER-SUPPLIER RELATIONS OF THE SEED POTATO MERCHANT

\* If your firm (or a part of it) is not a seed potato merchant, please go to the next page.

## Supply side: the relations of your firm.....

### **with breeders**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

### **with seed potato farmers**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

## Demand side: relations of your firm.....

### **with ware potato farmers**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

### **with ware potato merchants**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

### **with potato processors**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

### **with food retailers**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------



**BUYER-SUPPLIER RELATIONS OF THE WARE POTATO MERCHANT / PACKER**

- \* If your firm (or a part of it) is not a ware potato merchant / packer, please go to the next page.

Supply side: the relations of your firm.....**with ware potato farmers**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

**with seed potato merchants**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

Demand side: relations of your firm.....**with potato processors**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

**with food retailers**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

## BUYER-SUPPLIER RELATIONS OF THE POTATO PROCESSOR

\* If your firm (or a part of it) is not a potato processor, please go to the next page.

### Supply side: the relations of your firm.....

#### **with breeders**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

#### **with seed potato merchants**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

#### **with ware potato farmers**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

#### **with ware potato merchants**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

### Demand side: relations of your firm.....

#### **with food retailers**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

#### **with fast-food restaurant chains**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

#### **with wholesalers**

spot-market relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	co-operative relations	not relevant <input type="checkbox"/>
-----------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	---------------------------------------

### III The basis of your company's inter-firm relations

#### 1. What is in general the basis of your firm's exchange relations?

- Supply side:
- ☐ **Formal contracts**
    - 0 standard contracts
    - 0 very precise contracts for every transaction
  - ☐ **Informal agreements**
    - 0 based on personal relations
    - 0 based on previous experiences
    - 0 based on social control
  - ☐ **Combination formal contract and informal agreement**
    - 0 agreements by telephone which are confirmed by fax
    - 0 other ways.....
- Demand side:
- ☐ **Formal contracts**
    - 0 standard contracts
    - 0 very precise contracts for every transaction
  - ☐ **Informal agreements**
    - 0 based on personal relations
    - 0 based on previous experiences
    - 0 based on social control
  - ☐ **Combination formal contracts and informal agreement**
    - 0 agreement by telephone which is later confirmed by fax
    - 0 other ways.....

#### 2. Is it easy or difficult for your firm to switch to another buyer or supplier?

- To another buyer:
- ☐ easy
  - ☐ not very easy
  - ☐ difficult

- To another supplier:
- ☐ easy
  - ☐ not very easy
  - ☐ difficult

☐ exceptions.....





## IV Horizontal relations

1. Has your firm any co-operative relations with competitors/colleagues?

☐ No

☐ Sometimes, or to a limited extend

☐ Yes  $\Rightarrow$  If this is the case, does this include:

☐ information sharing

☐ joint activities (e.g., a joint venture)

☐ joint research and development

☐ sharing of (parts of) the production capacity

☐ mutual share holdings

## V Functions of trade/industry associations

Please select the association(s) which are relevant to your firm (e.g., membership). Then circle the appropriate symbols to indicate the degree in which the function(s) mentioned are performed by the association(s).

Symbols:

+	= function performed
+/-	= function more or less performed
-	= function not performed

Associations:

BPC	British Potato Council
NASPM	National Association of Seed Potato Merchants
SPTA	Scottish Potato Trade Association
FPC	Fresh Produce Consortium
PPA	Potato Processors Association



Associations relevant to your firm ⇒	□ BPC	□ NASPM	□ SPTA	□ FPC	□ PPA	others .....
<b>Functions</b>						
- The development of general rules and monitoring them	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -
- Arbitration in case of conflicts between firms	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -
- The reduction of destructive competition (e.g.: price dumping)	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -
- Diffusion of knowledge and information	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -
- Risk sharing through the initiation of joint activities	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -
- Initiation and co-ordination of actions in case of sector- wide crises	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -
- Promotion of interests with respect to EU and national state policy	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -
- Meeting point where directors of competing firms discuss developments in their industry	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -
- Meeting point where directors of buying and supplying firms discuss developments in their industry	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -	+ +/- -

## VI General Information

1. In which year was your firm established?

In.....

2. What is the number of employees of your firm?

(approximately).....

3. What is the firm's rank in the market in terms of market share (e.g.: no. 1, 2, etc....)?

(Estimation).....

4. What is the firm's annual turnover in terms of money or production?

(Approximately).....

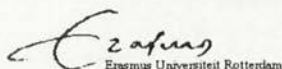
5. Is there a recent profile of the firm, an annual report and/or a company history available?

END OF THE INTERVIEW  
MANY THANKS!

## Appendix VI

Interview protocol for business associations (English version)

<p><b>Interview protocol</b> <b>#</b> <b>Business associations in the UK Potato Industry</b></p>
--



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Tel: +31 10 408 2384

Fax: +31 10 453 0137

<b>Name of the organisation</b>	.....
---------------------------------	-------

<b>Name of the respondent</b>	.....
-------------------------------	-------

<b>Date of the interview</b>	.....
------------------------------	-------

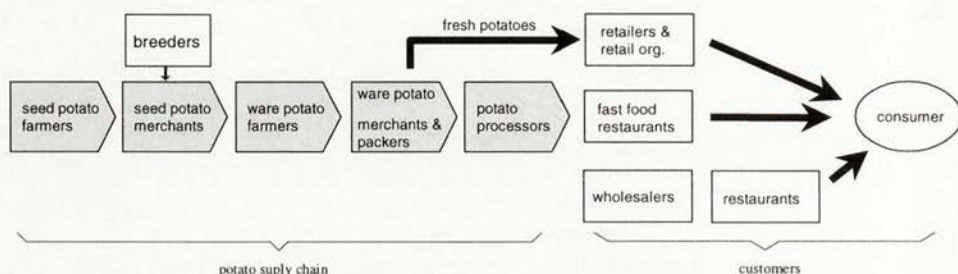


## I INTRODUCTION

### Key question:

What is the role of trade/industry associations in the UK and Dutch potato industry?

### Firms and flows in the potato supply chain



### Trade/industry associations for firms (not farmers) in the potato industry

- 1 Breeders' associations
- 2 Seed potato merchants' associations
- 3 Ware potato merchants' associations
- 4 Packers' associations
- 5 Potato processors' associations

## II QUESTIONS

1. When, by whom, and why was your organisation established?
2. What are the most important activities of the organisation?
3. What are the most important collective and/or individual services provided to the members of your organisation?
4. Have any shifts occurred in the role played by your organisation in the past decade?
  - e.g.: change of objectives, more active vs. less active.
5. Are there any formal/informal relations with other intermediary organisations in the potato industry?
  - If yes: what is the purpose and the content of these relations?
6. Does your organisation play a role in the development of formal/informal inter-firm relations?
7. What is the most important reason for firms to become a member of your organisation?
8. What is your vision about the future role of your organisation in the potato industry?
  - For instance: new activities, internationalisation, increasing or decreasing importance.

### III ACTIVITIES OF TRADE/INDUSTRY ASSOCIATIONS

[√] Please tick a box ('high', 'medium', or 'low') to indicate the relevance of the activities mentioned. Please motivate your choice.

#### Relevance

#### Activities

High Medium Low

#### Reduction of uncertainties

☐ ☐ ☐

- The development of general rules and monitoring them

☐ ☐ ☐

- Arbitration in case of conflicts between firms

☐ ☐ ☐

- The reduction of destructive competition

☐ ☐ ☐

- Diffusion of knowledge and information

High Medium Low

#### Reduction of risks

☐ ☐ ☐

- The initiation of joint activities such as research projects

☐ ☐ ☐

- Initiation and co-ordination of actions in case of sector wide crises such as brown rot

High Medium Low

#### Industry cohesion

☐ ☐ ☐

- Promotion of interests with respect to governmental policies (national and European level)

☐ ☐ ☐

- Formal or informal meeting point for the directors of firms which are each other's competitors (horizontal cohesion)

☐ ☐ ☐

- Formal or informal meeting point for the directors of firms which operate in different stages of the supply chain (vertical cohesion).

END OF THE INTERVIEW.....many thanks!



## Appendix VII

Interview data about the nature of inter-firm relations in the UK potato industry

### UK firms

Firm	Firm type	Relation with:	Nature of the inter-firm relations				
			1	2	3	4	not relevant
UK1	<i>Seed potato</i>	breeders					x
	<i>merchant</i>	s-farmers	x				
		w-farmers					x
		w-merchants	x				
		processors					x
		retailers					x
UK2	<i>Seed potato</i>	breeders		x			
	<i>merchant</i>	s-farmers					x
		w-farmers		x			
		w-merchants		x			
		processors			x		
		retailers					x
UK3	<i>Seed potato</i>	breeders					x
	<i>merchant</i>	s-farmers				x	
		w-farmers			x		
		w-merchants					x
		processors		x			
		retailers					x
UK4	<i>Seed potato</i>	breeders					x
	<i>merchant</i>	s-farmers					x
		w-farmers			x		
		w-merchants					x
		processors					x
		retailers					x
UK5	<i>Seed potato</i>	breeders				x	
	<i>merchant</i>	s-farmers		x			
		w-farmers	x				
		w-merchants					x
		processors					x
		retailers					x

## APPENDIX VII CONTINUED

UK6	<i>Seed potato</i>	breeders				x	
	<i>merchant</i>	s-farmers	x				
		w-farmers	x				
		w-merchants					x
		processors					x
		retailers					x
UK7	<i>Seed potato</i>	breeders					x
	<i>merchant</i>	s-farmers		x			
		w-farmers	x				
		w-merchants	x				
		processors					x
		retailers					x
UK8	<i>Seed potato</i>	breeders				x	
	<i>merchant</i>	s-farmers		x			
		w-farmers					x
		w-merchants					x
		processors					x
		retailers					x
	<i>Ware potato</i>	s-merchants					x
	<i>merchant/packer</i>	w-farmers			x		
		processors		x			
		retailers			x		
UK9	<i>Ware potato</i>	s-merchants				x	
	<i>merchant/packer</i>	w-farmers	x				
		processors					x
		retailers		x			
UK10	<i>Ware potato</i>	s-merchants					x
	<i>merchant/packer</i>	w-farmers		x			
		processors					x
		retailers		x			

## APPENDIX VII CONTINUED

UK11	Seed potato	breeders				x	
	merchant	s-farmers		x			
		w-farmers					x
		w-merchants					x
		processors					x
		retailers					x
	Ware potato	s-merchants					x
	merchant/packer	w-farmers			x		
		processors		x			
UK12		retailers		x			
	Seed potato	breeders				x	
	merchant	s-farmers				x	
		w-farmers			x		
		w-merchants					x
		processors		x			
		retailers		x			
	Ware potato	s-merchants					x
UK13	merchant/packer	w-farmers			x		
		processors		x			
		retailers		x			
	Seed potato	breeders					x
	merchant	s-farmers					x
		w-farmers					x
		w-merchants					x
		processors					x
		retailers					x
UK13							
	Ware potato	s-merchants					x
	merchant/packer	w-farmers		x			
		processors					x
		retailers					x
	Potato	breeders					x
	Processor	s-merchants					x
		w-merchants					x
		w-farmers					x
UK13		retailers		x			
		fast-food rest.		x			
		wholesalers		x			



## APPENDIX VII CONTINUED

UK14	<i>Potato</i>	breeders					x
	<i>Processor</i>	s-merchants					x
		w-merchants	x				
		w-farmers	x				
		retailers				x	
		fast-food rest.	x				
		wholesalers	x				
UK15	<i>Potato</i>	breeders					x
	<i>Processor</i>	s-merchants	x				
		w-merchants	x				
		w-farmers					
		retailers			x		
		fast-food rest.					x
		wholesalers					x
UK16	<i>Potato</i>	breeders					x
	<i>Processor</i>	s-merchants					x
		w-merchants	x				
		w-farmers	x				
		retailers		x			
		fast-food rest.	x				
		wholesalers	x				
UK17	<i>Potato</i>	breeders					x
	<i>Processor</i>	s-merchants					x
		w-merchants	x				
		w-farmers	x				
		retailers					x
		fast-food rest.	x				
		wholesalers			x		

- 1 = The buyer-supplier relation is spot-market in nature.  
 2 = The buyer-supplier relation is *mainly* spot-market in nature but has some cooperative characteristics as well.  
 3 = The buyer-supplier relation is *mainly* cooperative in nature but has some spot-market characteristics as well.  
 4 = The buyer-supplier relation is cooperative in nature.

Arial font = supply side  
 Times font = demand side  
*Italics font* = core activity of the firm

## APPENDIX VII CONTINUED

**Totals of the scores**

	1	2	3	4	not relevant
<b>Total (abs.)</b>	23	21	10	10	60
<b>Total % of 64</b>	36%	33%	16%	16%	48%
<b>Supply (abs.)</b>	11	7	3	9	24
<b>Supply % of 30</b>	37%	23%	10%	30%	44%
<b>Demand (abs.)</b>	12	14	7	1	37
<b>Demand % of 34</b>	35	41	21	3	52

Total possible relations: 125 (54 supply and 71 buyer relations)

Criteria used to arrive at the scores**Characteristics of spot-market relations**

1. Information exchange limited to price, quality, and quantity
2. No exchange of knowledge
3. Relations based on formal contracts
4. Short-term relations: limited to discrete transactions and/or single seasons;
5. The price and quality are the major selection criteria for buyers/suppliers

**Characteristics of cooperative relations**

1. Information exchange, going beyond transactional information
2. Exchange of knowledge
3. Relations for an important part based on mutual trust
4. Long-term relations: time periods of more than 3 years
5. Risk sharing (e.g., joint investments, joint operations, and/or joint R&D projects).

Examples:

**spot-market relations**    ☒    ☐    ☐    ☐    **cooperative relations**

The buyer-supplier relation is spot-market in nature

(4-5 of the spot-market characteristics are relevant, and 0-1 of the cooperative characteristics).

**spot-market relations**    ☐    ☒    ☐    ☐    **cooperative relations**

The buyer-supplier relation is *mainly* spot-market in nature but has cooperative features too.

(3-4 spot-market and 1-2 cooperative characteristics are relevant).

**spot-market relations**    ☐    ☐    ☒    ☐    **cooperative relations**

The buyer-supplier relation is *mainly* cooperative in nature but has spot-market features too.

(3-4 cooperative and 1-2 spot-market characteristics are relevant).

**spot-market relations**    ☐    ☐    ☐    ☒    **cooperative relations**

The buyer-supplier relation is cooperative in nature.

(4-5 of the cooperative characteristics are relevant, and 0-1 of the spot-market characteristics).





## Appendix VIII

Interview data about the nature of inter-firm relations in the Dutch potato industry

### Dutch firms

Firm	Firm type	Relation with:	Nature of the inter-firm relations				
			1	2	3	4	not relevant
D1	<i>Seed potato merchant</i>	breeders				x	
		s-farmers			x		
		w-farmers					x
		w-merchants				x	
		processors				x	
		retailers					x
D2	<i>Seed potato merchant</i>	breeders				x	
		s-farmers			x		
		w-farmers			x		
		w-merchants					x
		processors			x		
		retailers					x
	Ware potato merchant/packer	s-merchants					x
		w-farmers			x		
		processors			x		
		retailers					x
D3	<i>Seed potato merchant</i>	breeders				x	
		s-farmers			x		
		w-farmers					x
		w-merchants			x		
		processors			x		
		retailers			x		
D4	<i>Seed potato merchant</i>	breeders				x	
		s-farmers				x	
		w-farmers				x	
		w-merchants				x	
		processors				x	
		retailers				x	
	Ware potato merchant/packer	s-merchants				x	
		w-farmers				x	
		processors				x	
		retailers				x	

## APPENDIX VIII CONTINUED

D5	Seed potato	breeders				x	
	merchant	s-farmers			x		
		w-farmers					x
		w-merchants					x
		processors					x
		retailers					x
	Ware potato	s-merchants					x
	merchant/packer	w-farmers			x		
		processors		x			
		retailers				x	
	Potato	breeders					x
	Processor	s-merchants					x
		w-merchants					x
		w-farmers					x
D6		retailers			x		
		fast-food rest.			x		
		wholesalers	x				
	Seed potato	breeders			x		
	merchant	s-farmers		x			
		w-farmers			x		
		w-merchants					x
		processors					x
		retailers					x
	Ware potato	s-merchants					x
	merchant/packer	w-farmers			x		
		processors				x	
		retailers					x

## APPENDIX VIII CONTINUED

D7	Seed potato	breeders			x	
	merchant	s-farmers		x		
		w-farmers			x	
		w-merchants				x
		processors				x
		retailers				x
	Ware potato	s-merchants				x
	merchant/packer	w-farmers			x	
		processors			x	
		retailers				x
	Potato	breeders				x
	Processor	s-merchants				x
D8		w-merchants				x
		w-farmers				x
		retailers				x
		fast-food rest.				x
		wholesalers			x	
D9	Ware potato	s-merchants				x
	merchant/packer	w-farmers				x
		processors			x	
		retailers				x
D9	Potato	breeders			x	
	Processor	s-merchants		x		
		w-merchants		x		
		w-farmers		x		
		retailers	x			
		fast-food rest.	x			
		wholesalers	x			



## APPENDIX VIII CONTINUED

D10	Seed potato	breeders				x	
		merchant	s-farmers			x	
			w-farmers			x	
			w-merchants			x	
			processors			x	
			retailers				x
	Ware potato	s-merchants					x
		merchant/packer	w-farmers		x		
			processors				x
			retailers			x	
	<i>Potato</i>	breeders					x
		<i>Processor</i>	s-merchants				x
			w-merchants				x
			w-farmers				x
			retailers		x		
			fast-food rest.	x			
			wholesalers	x			
D11	<i>Potato</i>	breeders				x	
	<i>Processor</i>	s-merchants				x	
		w-merchants		x			
		w-farmers			x		
		retailers	x				
		fast-food rest.		x			
		wholesalers		x			
D12	<i>Potato</i>	breeders				x	
	<i>Processor</i>	s-merchants					x
		w-merchants				x	
		w-farmers				x	
		retailers				x	
		fast-food rest.			x		
		wholesalers				x	

- 1 = The buyer-supplier relation is spot-market in nature.  
 2 = The buyer-supplier relation is *mainly* spot-market in nature but has some cooperative characteristics as well.  
 3 = The buyer-supplier relation is *mainly* cooperative in nature but has some spot-market characteristics as well.  
 4 = The buyer-supplier relation is cooperative in nature.

Arial font= supply side; Times font= demand side; *Italics font* = core activity of the firm

## APPENDIX VIII CONTINUED

**Totals of the scores**

	1	2	3	4	not relevant
<b>Total (abs.)</b>	5	11	28	34	40
<b>Total % of 78</b>	7%	14%	36%	44%	34%
<b>Supply (abs.)</b>	0	6	11	17	18
<b>Supply % of 34</b>	0%	18%	32%	50%	36%
<b>Demand (abs.)</b>	5	5	17	17	22
<b>Demand % of 44</b>	11%	11%	39%	39%	33%

Total possible relations: 118 (52 supply and 66 buyer relations)

Criteria used to arrive at the scores**Characteristics of spot-market relations**

1. Information exchange limited to price, quality, and quantity
2. No exchange of knowledge
3. Relations based on formal contracts
4. Short-term relations: limited to discrete transactions and/or single seasons;
5. The price and quality are the major selection criteria for buyers/suppliers

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4. Long-term relations: time periods of more than 3 years
5. Risk sharing (e.g., joint investments, joint operations, and/or joint R&D projects).

Examples:

**spot-market relations**    ☒    ☐    ☐    ☐    **cooperative relations**

The buyer-supplier relation is spot-market in nature

(4-5 of the spot-market characteristics are relevant, and 0-1 of the cooperative characteristics).

**spot-market relations**    ☐    ☒    ☐    ☐    **cooperative relations**

The buyer-supplier relation is *mainly* spot-market in nature but has cooperative features too.  
(3-4 spot-market and 1-2 cooperative characteristics are relevant).

**spot-market relations**    ☐    ☐    ☒    ☐    **cooperative relations**

The buyer-supplier relation is *mainly* cooperative in nature but has spot-market features too.  
(3-4 cooperative and 1-2 spot-market characteristics are relevant).

**spot-market relations**    ☐    ☐    ☐    ☒    **cooperative relations**

The buyer-supplier relation is cooperative in nature.

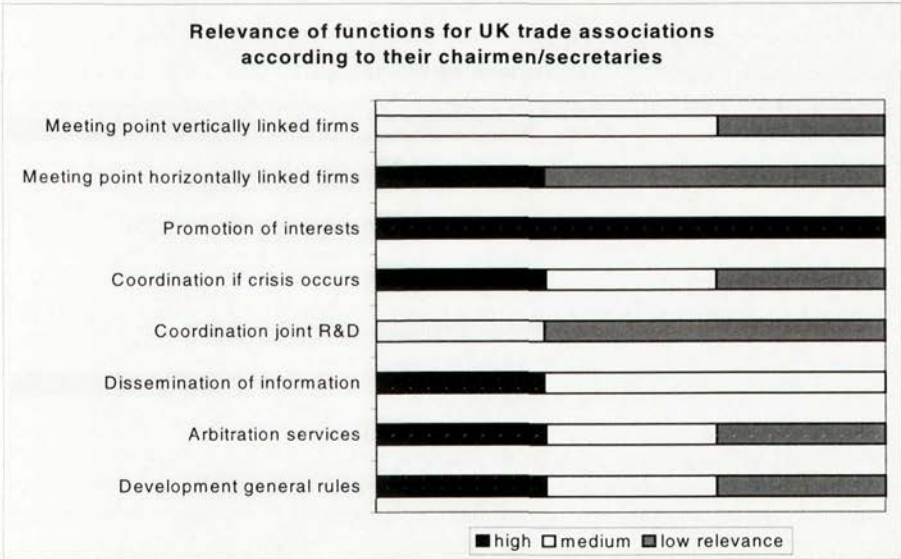
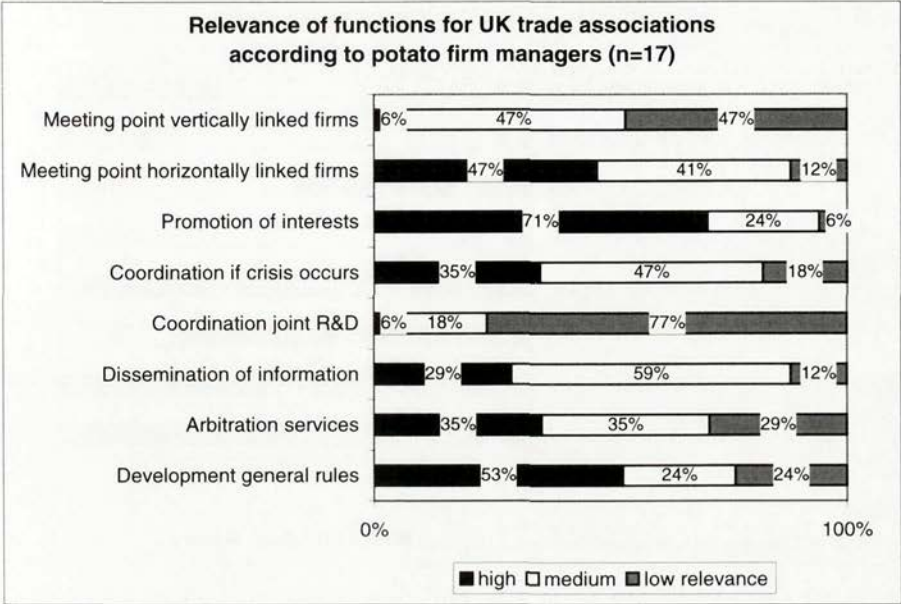
(4-5 of the cooperative characteristics are relevant, and 0-1 of the spot-market characteristics).



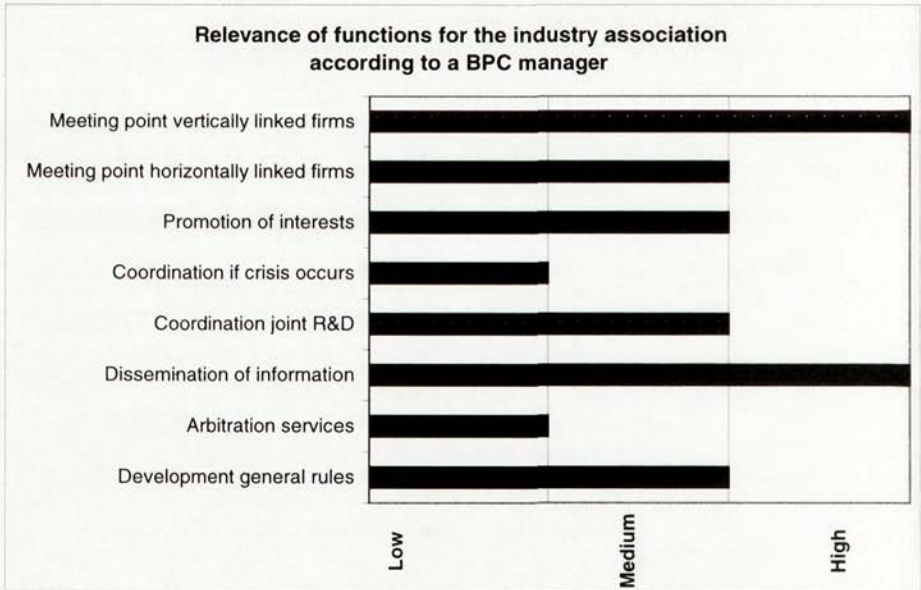
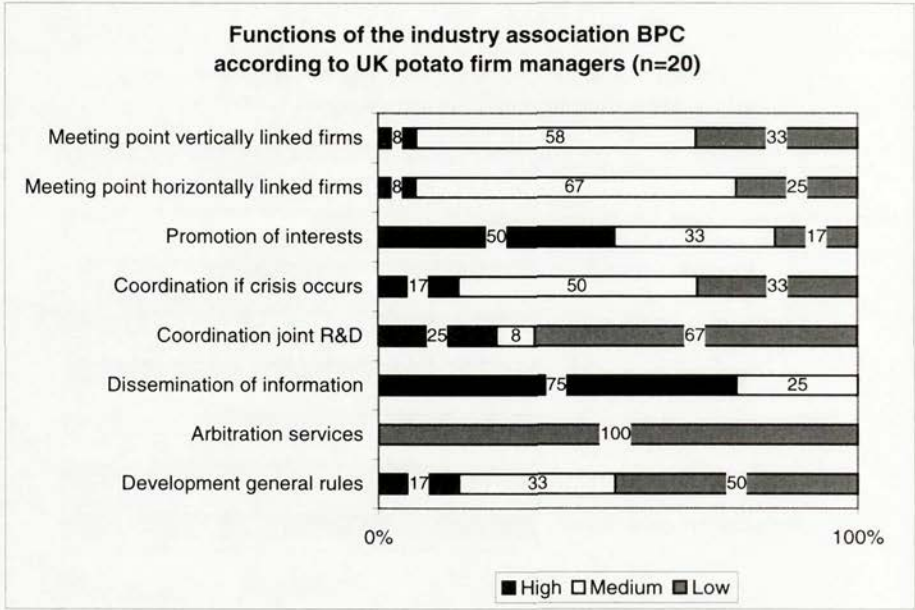


Appendix IX

Functions of business associations in the UK potato industry

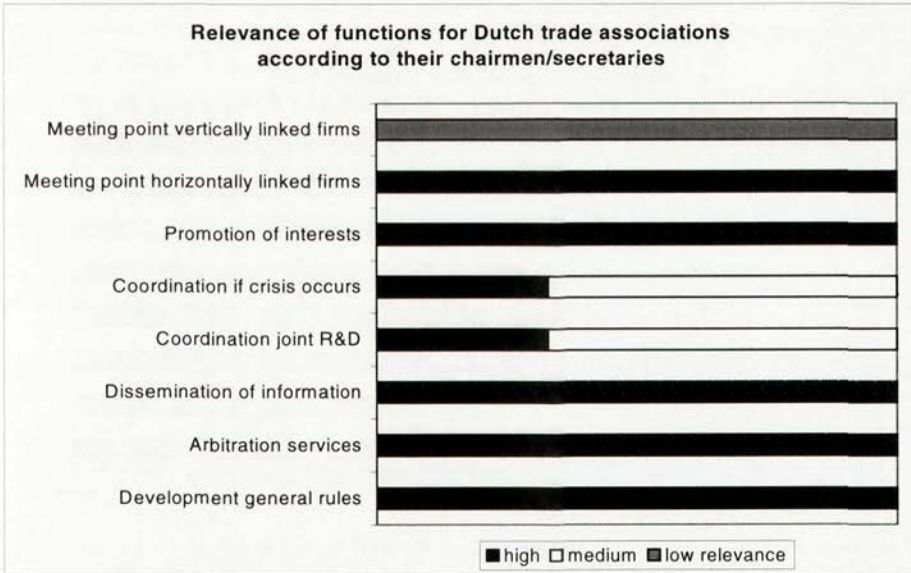
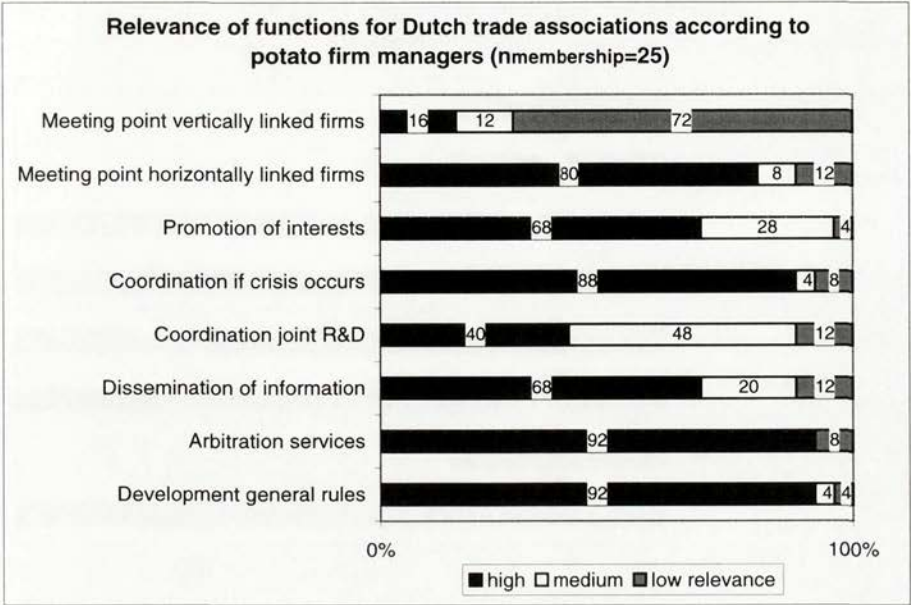


APPENDIX IX CONTINUED



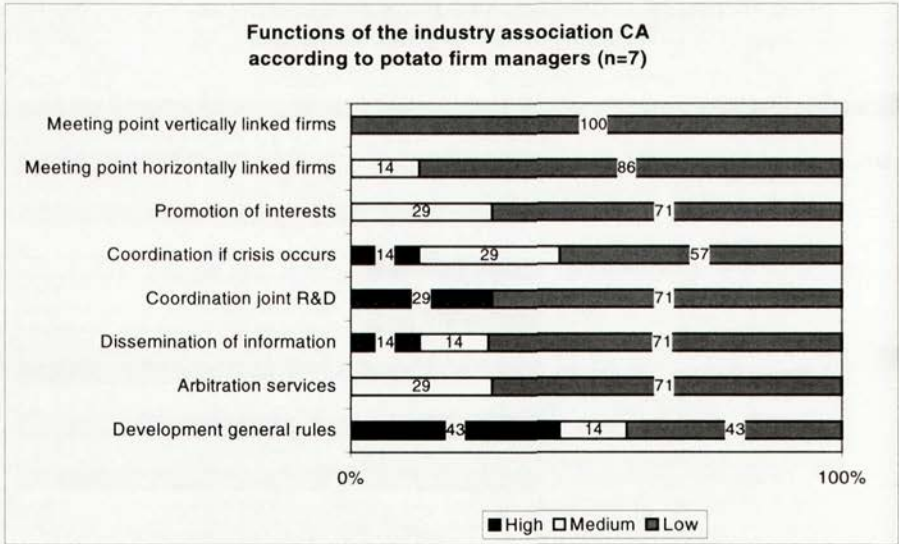
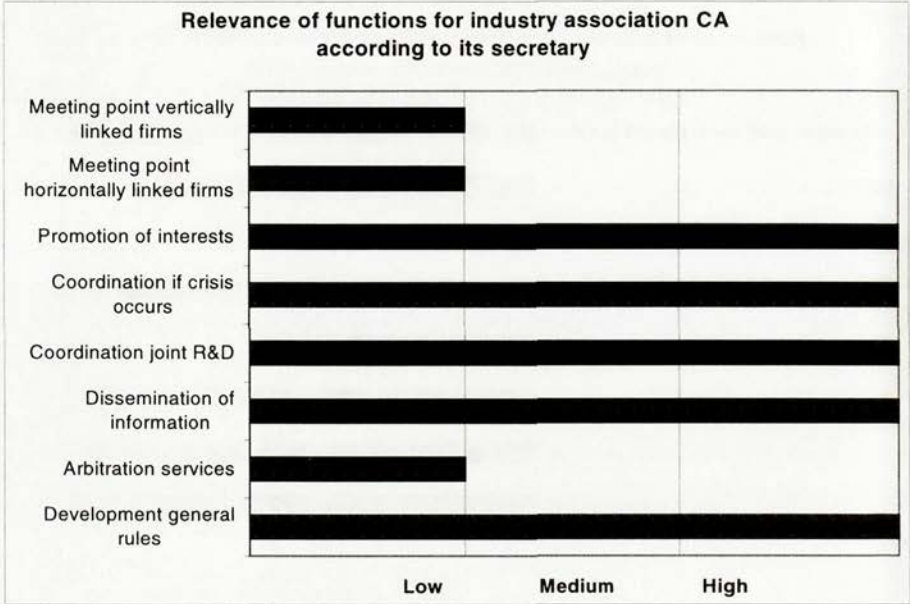
Appendix X

Functions of business associations in the Dutch potato industry





APPENDIX X CONTINUED



## Appendix XI

Congress papers with preliminary findings of the research project, presented to practitioners and/or scholars<sup>1</sup>

### Published congress papers

Rademakers, M.F.L. (1999), Same Structures, Different Roles: Business Associations in the Dutch and UK Agri-Food Industry. *Proceedings of the 15<sup>th</sup> EGOS Colloquium: 'Organizations in a Challenging World: Theories, Practices and Societies'*, July 4-6, Warwick, UK (forthcoming).

Rademakers, M.F.L. (1999), Agents of Trust: Dutch and British Business Associations in Networks of Agri-Food Firms. *Proceedings of the IAMA World Food and Agribusiness Congress: 'Building Trust in the Agro-Food System: Trade, Technology and Competitiveness'*, June 13-16, Florence, Italy, (forthcoming).

Rademakers, M.F.L. (1999), Different Environments, Different Links: Inter-Firm Relations in the UK and Dutch Agri-Food Industry. *Proceedings of the 5<sup>th</sup> National LAiOOB Conference: 'Go with the Flow- Management Hypes and Hype Management'*, February 25, Amersfoort, the Netherlands, pp. 205-214.

Rademakers M.F.L. (1998), Authority as Inter-firm Co-ordination Mechanism in Different Institutional Settings: The Dutch and UK potato industry compared. *Proceedings of the 14<sup>th</sup> EGOS Colloquium: 'Stretching the Boundaries of Organization Studies into the Next Millenium'*. July 9-11, Maastricht, the Netherlands, pp. 18-19.

Rademakers, M.F.L. (1998), Inter-firm Co-operation in Agribusiness: Towards a Framework for Cross-national Analysis. In: Ziggers, G.W., J.H.Trienekens, P.J.P. Zuurbier, *Proceedings of the 3rd International Conference on Chain Management in Agribusiness and the Food Industry*, May 28-29, Wageningen, the Netherlands, pp. 903-910.

Rademakers, M.F.L. (1997), Internationalisation and Concentration of Food Supply Systems: implications for firms in the European Potato Sector, *Proceedings of the conference 'Globalisation of the Food Industry: Policy Implications'*, September 18-19, Reading, England, pp.456-480.

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<sup>1</sup> EGOS = European Group for Organization Studies

IAMA = International Food and Agribusiness Association

SMS = Strategic Management Society

EMOT = European Management and Organization in Transition

LAiOOB = Landelijk AiO-Overleg Bedrijfskunde

(national platform for doctoral students of management and organization)

## APPENDIX XI CONTINUED

Rademakers, M.F.L. (1996), Transformation of Management and Organisation in Agribusiness: Towards a Framework for Analysing the Creation of Competitive Governance Structures. *Proceedings of the 4th National LAiOOB Conference 'Grenzen aan Wetenschappelijk Onderzoek: Kaders van Theoretisch en Ontwerpgericht Onderzoek'*, November 27, Amersfoort, the Netherlands, pp. 41-50.

Bosch, F.A.J. van den, C.P. Veerman, M.F.L. Rademakers (1996), Managing the Boundaries of Firms in Agribusiness: Managerial Aspects of Corporate Governance Concerning Vertical and Horizontal Integration. *Proceedings of the 2nd International Conference on Chain Management in Agri- and Food Business*, May 30-31, Wageningen, the Netherlands, pp. 603-605.

**Refereed but unpublished congress papers**

Rademakers, M.F.L., Distinct Institutions, Different Links: Supply Relations in the UK and Dutch Agro-Food Industry. Interactive paper for the Academy of Management Conference: *Change and Development Journeys into a Pluralistic World*, August 8-11, 1999, Chicago, USA.

Rademakers, M.F.L., Cross-national Analysis of Inter-firm Collaboration: The Dutch and UK potato industry compared. Paper for the Mercosur IAMA World Food and Agribusiness Congress: *Building Relationships to Feed the World*, June 28, 1998, Punta del Este, Uruguay.

Rademakers, M.F.L., Managing the Renewal of Inter-firm Relations in European Agribusiness: A Framework for Analysis, Paper for the 17th. SMS Annual International Conference: *Managing in an Interconnected World*, 5-8 October 1997, Barcelona, Spain.

Rademakers, M.F.L., Managing & Creating Inter-firm Relationships in European Agribusiness. Paper presented at the EMOT Summer School: *The Comparative Analysis of Changing Management and Organisation in Europe*, August 22-27, 1997, Helsinki, Finland.

Rademakers, M.F.L., Changing Inter-firm Relations in European Agribusiness: towards a framework for cross-national comparative analysis. Paper presented at the EMOT Summer School: *The Relational Perspective in Organizational Research: Concepts and Research Methods*, September 16-20, 1997, Bologna, Italy.







## Samenvatting (summary in Dutch)

### 1 Inleiding

Samenwerking tussen bedrijven heeft in het afgelopen decennium veel aandacht gekregen in de management- en organisatieliteratuur. Dat komt omdat bedrijven concurrentievoordeel kunnen behalen door samen te werken met leveranciers, afnemers, concurrenten en/of ondernemingen uit andere industrietakken. De huidige literatuur over samenwerking tussen bedrijven behandelt een zeer breed scala van vormen, typen en ontwikkelingen op dit vlak. Dit wordt bovendien gedaan vanuit diverse gezichtspunten, benaderingen en disciplines. Desondanks is er tot op heden weinig aandacht besteed aan de invloed van sociale instituties op de ontwikkeling van samenwerking tussen bedrijven. Dit is opmerkelijk, gegeven de groeiende consensus onder management- en organisatiewetenschappers dat sociale instituties de ontwikkeling van economische organisatievormen in belangrijke mate beïnvloeden. In dit verband worden sociale instituties beschouwd als complexe cognitieve, normatieve en regulatieve structuren en activiteiten die na verloop van tijd een zekere stabiliteit gekregen hebben. Deze instituties geven betekenis aan sociaal gedrag. Voorbeelden zijn wetten, culturele conventies en financiële systemen. Vanuit een bedrijfskundig perspectief kunnen sociale instituties beschouwd worden als factoren die de percepties en interacties van managers kanaliseren. Daardoor beïnvloeden zij ook de ontwikkeling van inter-organisationale structuren.

ONDERZOEKSVRAGEN. Het onderzoek dat ten grondslag ligt aan dit proefschrift is bedoeld om kennis te genereren over hoe dominante sociale instituties (sociale kerninstituties) de ontwikkeling van samenwerking tussen bedrijven beïnvloeden. Ofwel: wat is de invloed van sociale kerninstituties op de ontwikkeling van



samenwerking tussen bedrijven? Deze centrale vraag valt uiteen in drie verschillende deelvragen. Ten eerste: Wat zijn de belangrijkste attributen van horizontale en verticale samenwerking tussen bedrijven? Ten tweede: Van welke sociale instituties kan verondersteld worden dat deze de ontwikkeling van samenwerkingsrelaties tussen bedrijven beïnvloeden? Ten derde: Wat is het karakter van de sociale kerninstituties waardoor zij de ontwikkeling van samenwerkingsrelaties tussen bedrijven bemoeilijken of juist aanmoedigen? Deze vragen worden in dit proefschrift behandeld.

## 2 Theorie

DE RELEVANTIE VAN SAMENWERKING. Een verkenning van de management- en organisatieliteratuur leert dat samenwerking tussen bedrijven een belangrijk onderwerp is dat zowel management als wetenschap bezig houdt. Via goed gestuurde en georganiseerde vormen van samenwerking blijken bedrijven in staat te zijn hun innovatiekracht, responsiesnelheid, efficiency en/of strategische vaardigheden te vergroten en hun strategische marktpositie(s) te verbeteren.

MARKTEN, HIËRARCHIEËN EN NETWERKEN. Door te verwijzen naar werkelijk bestaande vormen van samenwerking die in de literatuur beschreven staan, kan worden aangegeven dat samenwerkingsarrangementen tussen bedrijven doorgaans een mix van karakteristieken in zich herbergen van ideaaltypische netwerken, markten en hiërarchieën. Op basis van dezelfde literatuur kan worden gedestilleerd dat er een breed scala van sterk verschillende samenwerkingsvormen bestaat in diverse industrietakken van verschillende landen.

PARADIGMA'S EN POSITIONERING. De literatuur op het gebied van samenwerking tussen bedrijven is zeer uitgebreid maar ook sterk gefragmenteerd. Dat komt doordat onderzoek over dit onderwerp is (en wordt) gedaan op basis van veel verschillende theorieën en methoden. Daarbij komt dat er gewerkt wordt met verschillende analyseniveaus. Desondanks kan het zeer brede onderzoeksveld onderverdeeld worden in slechts twee paradigma's: het 'bestuurs' en het 'sociale netwerk' paradigma. Het onderzoek in dit proefschrift kan in het 'bestuursparadigma' geplaatst worden en dan in het bijzonder in de 'institutionele theorie' variant hiervan. Een nog nauwkeuriger positionering van dit onderzoek wordt verkregen door dieper in te gaan op het gehanteerde perspectief op sociale instituties. Dit perspectief komt overeen met recente,

hoofdzakelijk Europese stromingen in het denken over sociale instituties en hun invloed op vormen van economische organisatie. Deze stromingen beschouwen sociale instituties als fenomenen met een hoofdzakelijk nationaal-specifiek karakter. Hierin verschilt het perspectief van andere benaderingen waarin bijvoorbeeld ook bedrijven als sociale instituties worden beschouwd en geanalyseerd, of waarin men zich beperkt tot formele wetten en organisatiestructuren.

### 3 Constructie van het analysekader

ANALYSEKADERS VOOR VERGELIJKEND ONDERZOEK. In de literatuur zijn vier hoofdbenaderingen te onderscheiden die gebruikt worden om internationaal vergelijkende studies te maken van economische organisatievormen in hun institutionele context. De vier benaderingen staan bekend als de 'societal approach', de 'societal logic approach', de 'comparative capitalism approach' en de 'business systems approach'. Ze verschillen aanzienlijk van elkaar voor wat betreft hun primaire aandachtsgebied, gebruikte analysekaders, methoden en niveaus van analyse. Een overeenkomst is dat in alle vier de benaderingen aandacht wordt besteed aan zowel de aard als de historische wortels van sociale instituties, gezien vanuit een nationaal perspectief.

HET 'MARKET ORGANIZATION FRAMEWORK'. De benadering die het beste past als conceptuele basis voor het onderzoek is de 'business systems approach'. Deze benadering verschaft een analysekader, bekend als het 'market organization framework', dat het mogelijk maakt om karakteristieken van samenwerkingsrelaties op een systematische manier in verband te brengen met een set van sociale kerninstituties. Het analysekader voor dit onderzoek is een aangepaste en verder uitgewerkte versie van dit 'framework'. Het resultaat is een analysekader waarin onderscheid gemaakt wordt tussen verticale en horizontale samenwerkingsverbanden enerzijds, en bilaterale en multilaterale samenwerkingsverbanden anderzijds (zie de onderstaande matrix).

**Matrix:** Vormen van samenwerking tussen bedrijven

	<b>Bilateraal</b>	<b>Multilateraal</b>
<b>Verticaal</b>	Relaties tussen klant en leverancier	Industrieorganisaties
<b>Horizontaal</b>	Relaties tussen twee concurrenten	Brancheorganisaties



DE KERNATTRIBUTEN VAN SAMENWERKING. De belangrijkste attributen van de bilaterale samenwerkingsrelaties zijn nader gespecificeerd door deze uit te drukken in termen van de inhoud van 'hoofdstromen' tussen organisaties. Deze 'stromen' omvatten informatie-uitwisseling, wederzijds vertrouwen, en middelen en activiteiten. Deze concepten helpen om onderscheid te maken tussen verticale samenwerkingsrelaties en het tegengestelde daarvan: korte-termijn relaties (of: gelegenheidsrelaties). Daarnaast kan aan de hand van deze 'stromen' ook de mate en wijze van samenwerking tussen concurrenten in kaart gebracht worden. De multilaterale vormen van samenwerking worden in het analysekader onderscheiden in brancheorganisaties en industrieorganisaties. Brancheorganisaties brengen concurrerende bedrijven samen, terwijl industrieorganisaties bedrijven in de verschillende stappen van de waardeketen met elkaar verbinden. De relevantie van deze vormen van multilaterale samenwerking wordt in het analysekader behandeld door in te gaan op het ledental (volledige of gedeeltelijke vertegenwoordiging), hun wettelijke bevoegdheden en de functies die deze organisaties uitoefenen.

SOCIALE KERNINSTITUTIES. Het analysekader omvat ook een viertal sociale kerninstituten waarvan verondersteld wordt dat zij een belangrijke invloed kunnen hebben op de ontwikkeling van samenwerkingsverbanden tussen bedrijven. Hieronder bevinden zich instituten die de culturele en historische achtergrond van maatschappijen weerspiegelen. Daarnaast zijn er instituten die direct betrokken zijn bij economische activiteiten omdat ze gedeeltelijke of volledige controle uitoefenen over de toegang van bedrijven tot bedrijfsmiddelen, eigendomsrechten en de politiek.

De vier sociale kerninstituten in het analysekader zijn: 1) mechanismen om vertrouwen te genereren, 2) de legitimiteit van collectivistisch versus individualistisch gedrag, 3) de betrokkenheid van de overheid in de industrie en 4) het financiële systeem. Het karakter van deze instituten kan van land tot land en ook van industrie tot industrie verschillen. Mechanismen om vertrouwen te genereren kunnen onderverdeeld worden in 'proces' (vertrouwen opgebouwd op basis van ervaringen in het verleden), 'karakteristiek' (vertrouwen op basis van groepskenmerken) en 'institutioneel' (vertrouwen op basis van formele, afdwingbare wetten). Het karakter van deze sociale kerninstituten bepaalt in belangrijke mate waarop de relaties tussen bedrijven gebaseerd zijn. Het karakter van de tweede sociale kerninstituten weerspiegelt het relatieve gemak waarmee bedrijven wederzijdse toewijding en loyaliteit kunnen genereren. De derde sociale kerninstituten wordt in het analysekader opgesplitst in drie verschillende typen. Dit zijn de



'ontwikkellende', 'faciliterende' en de 'laissez-faire' overheidstypen. De 'ontwikkellende overheid' is zeer actief en direct betrokken bij de ontwikkeling van de industrie. Door de sterke bemoeienis is een dergelijke overheid een belangrijke bron van (on)zekerheid voor bedrijven. De 'faciliterende overheid' ondersteunt de ontwikkeling van de industrie, doch de belangrijkste initiatieven worden overgelaten aan het bedrijfsleven. De overheid creëert een zekere stabiliteit in de bedrijfsomgeving en moedigt zelfbestuur aan. De overheid van het 'laissez-faire' type laat de ontwikkeling van de industrie over aan marktkrachten. In een dergelijke situatie is de bedrijfsomgeving niet of slechts weinig gestructureerd. De vierde en laatste sociale kerninstitutie, het financiële systeem, wordt onderscheiden in twee typen: het kredietsysteem en het kapitaalsysteem. De eigenschap van het kredietsysteem is dat lange-termijn leningen, verstrekt door banken, de belangrijkste manier vormen voor bedrijven om in hun kapitaalbehoefte te voorzien. Hierdoor kunnen managers voor hun investeringen met relatief lange tijdshorizonten werken. De belangrijkste eigenschap van het kapitaalsysteem is dat bedrijven voor hun investeringen aangewezen zijn op ingehouden winsten of zeer liquide kapitaalmarkten, wat een korte-termijn houding van managers in de hand werkt.

Het karakter en de mogelijke invloed van sociale kerninstituties zijn hierboven afzonderlijk van elkaar behandeld, maar het moet benadrukt worden dat bij de analyse hun gezamenlijke invloed in beschouwing genomen dient te worden.

PROPOSITIES. Op basis van het analysekader zijn een vijftal proposities geformuleerd over de invloed van combinaties van sociale kerninstituties - met een verschillend karakter - op de ontwikkeling van samenwerking tussen bedrijven. Deze proposities beslaan twee extremen en drie middenposities op een continuüm. Bij dit continuüm worden de uiteinden gemarkeerd door combinaties van sociale kerninstituties die zodanig van karakter zijn dat ze tezamen óf een sterk faciliterende óf juist een sterk hinderende omgeving vormen voor de ontwikkeling van samenwerking tussen bedrijven.

#### 4 Methodologie

Dit onderzoek is uitgevoerd als een internationaal vergelijkende casestudie. De te vergelijken cases betreffen de aardappelsectoren in Nederland en het Verenigd Koninkrijk en bestaan uit gedetailleerde beschrijvingen van hoe en in welke mate bedrijven daar met elkaar samenwerken. Bovendien omvatten de cases per land een

beschrijving van de karaktertrekken van de sociale kerninstituties, gezien vanuit het perspectief van de industrie.

Het onderzoeksproces is uitgevoerd volgens een proces dat een voortdurende interactie tussen theorie en praktijk weerspiegelde. In 1997 en 1998 zijn gegevens verzameld over twaalf Nederlandse en zeventien Britse bedrijven. Deze bedrijven tezamen domineren de aardappelsectoren van beide landen met gezamenlijke marktaandelen tot meer dan 80% voor iedere stap in de waardeketen. Naast de aardappelbedrijven zijn in ieder land ook vier aardappelorganisaties in het onderzoek opgenomen. De gegevens werden verkregen door half gestructureerde, persoonlijke interviews. Extra gegevens werden verkregen uit secundaire bronnen. De analyse van deze gegevens vond plaats volgens een 'gesjabloneerde analyse', waarbij een lijst van kernconcepten (afgeleid van het analysekader) werd gebruikt om alle data te scannen, te categoriseren en te hergroeperen. De resultaten van de analyse werden vergeleken met de proposities die op basis van het analytische kader geformuleerd waren om op die manier te komen tot analytische generalisaties en conclusies.

## 5 Resultaten van de veldstudie

**VERKENNING VAN DE SECTOR.** De aardappelsector houdt zich in grote lijnen bezig met de productie van uitgangsmateriaal, de productie en distributie van consumptieaardappelen en aardappelverwerking. In beide landen wordt de aardappelsector gedomineerd door een relatief klein aantal bedrijven. Opmerkelijk is dat Nederlandse aardappelbedrijven zeer succesvol zijn in het buitenland. Dit is in tegenstelling tot hun tegenhangers in het Verenigd Koninkrijk, die meer gericht zijn op hun thuismarkt. De belangrijkste structurele veranderingen in de aardappelsector in de laatste helft van de 20<sup>e</sup> eeuw waren de grootschalige mechanisatie van de aardappelteelt, de internationalisatie van de markt voor aardappelen en aardappelproducten, de opkomst van aardappelverwerkers als dominante spelers in de sector, de introductie van het kwekersrecht, veranderende voorkeuren van consumenten, en de groeiende marktmacht van het grootwinkelbedrijf en de fastfood ketens.

**BEVINDINGEN OVER DE NEDERLANDSE AARDAPPELSECTOR.** Samenwerking tussen Nederlandse aardappelbedrijven is relatief sterk ontwikkeld. Dit wordt weerspiegeld door de bevinding dat verticale, bilaterale samenwerkingsrelaties domineren over kortetermijn relaties. De uitwisseling van kennis en informatie in de verticale relaties van de bedrijven overstijgt doorgaans het niveau van de transactie zelf. De relaties zijn voor het



grootste deel gebaseerd op wederzijds vertrouwen dat geworteld is in reputatie, sociale controle en persoonlijke contacten. Formele contracten worden praktisch altijd gebruikt, doch vooral als een praktische manier om transacties af te wikkelen en niet zozeer om vertrouwen te genereren. De transacties tussen Nederlandse aardappelbedrijven zijn doorgaans ingebed in lange-termijn relaties waarbij zowel pragmatische als meer duurzame vormen van risicodeling tussen afnemers en leveranciers voorkomen. De bedrijven die de Nederlandse aardappelindustrie domineren zijn bijna allemaal gericht op een of twee opeenvolgende activiteiten in de waardeketen. Een minderheid van dominante aardappelbedrijven is volledig verticaal geïntegreerd. De graad van zelfvoorziening is over het algemeen vrij laag.

In de Nederlandse aardappelsector is, ondanks de hevige onderlinge concurrentie, samenwerking tussen concurrenten en vrij normaal verschijnsel. Deze samenwerking is vaak pragmatisch maar soms ook strategisch van aard. De algemene tendens is dat (de managers van) bedrijven elkaar als concurrenten beschouwen, maar ook als collegae.

Multilaterale horizontale samenwerking in de vorm van brancheorganisaties is sterk ontwikkeld. In de Nederlandse aardappelsector verzorgen de brancheorganisaties een breed scala van functies en diensten voor hun leden. De versterking van de horizontale cohesie in de industrie wordt door de ondervraagde managers als één van de belangrijkste functies van deze organisaties beschouwd. Het ledenbestand van de brancheorganisaties omvat een grote meerderheid van (en soms praktisch alle) bedrijven die actief zijn in een bepaalde stap van de waardeketen. Lidmaatschap is op vrijwillige basis. De brancheorganisaties hebben zelf geen wetgevende bevoegdheden, maar kunnen wel via een indirecte weg algemeen geldende regels voor hun leden ontwikkelen en laten bewaken. De enige industrieorganisatie in de Nederlandse aardappelsector, die gefinancierd wordt op basis van heffingen, wordt door de meeste managers als een anachronisme beschouwd. De activiteiten en de omvang van deze organisatie zijn op initiatief van de aardappelbedrijven in de jaren '90 dan ook sterk ingekrompen.

BEVINDINGEN OVER DE AARDAPPELSECTOR IN HET VERENIGD KONINKRIJK. Samenwerking tussen bedrijven in het Verenigd Koninkrijk blijkt niet erg sterk ontwikkeld te zijn. Korte-termijn relaties domineren sterk over samenwerkingsrelaties tussen kopende en verkopende partijen. Meer dan driekwart van die verticale relaties zijn volgens de ondervraagde managers van het korte-termijn type. Informatie-uitwisseling is beperkt tot de transactie, terwijl kennisuitwisseling doorgaans niet van toepassing is. De relaties



met leveranciers zijn over het algemeen gebaseerd op combinaties van formele en informele contracten en afspraken. De relaties met afnemers (in het bijzonder de supermarkten en verwerkers) zijn vrijwel zonder uitzondering gebaseerd op nauw gespecificeerde contracten. De verticale relaties duren even lang als het contract geldig is. Desalniettemin komen ook lange-termijn relaties voor, die bestaan uit opeenvolgende korte-termijn contracten. Daarnaast blijken dominante aardappelbedrijven in het Verenigd Koninkrijk in hoge mate verticaal geïntegreerd te zijn en een groot vermogen te hebben om zichzelf te bedruipen.

Ook horizontale samenwerking tussen aardappelbedrijven in het Verenigd Koninkrijk komt slechts in zeer beperkte mate voor. Er is sprake van enkele joint ventures, maar andere mogelijke vormen van horizontale samenwerking zijn zeldzaam.

De activiteiten van brancheorganisaties worden door de managers grotendeels onbelangrijk gevonden. Uitzonderingen zijn lobby-activiteiten en informatieverspreiding. Het ledenbestand van deze organisaties is gefragmenteerd. Daarnaast hebben ze geen wetgevende bevoegdheden. Verrassend is dat er wel een zeer actieve en door de managers van aardappelbedrijven ook relevant gevonden industrieorganisatie actief is. De bedrijven zijn verplicht om heffingen aan deze organisatie te betalen waarmee collectieve activiteiten gefinancierd worden.

## **6 Vergelijking en discussie van de bevindingen**

De patronen die de mate en wijze van samenwerking in de aardappelsectoren van Nederland en het Verenigd Koninkrijk weerspiegelen, blijken nagenoeg tegengesteld en van elkaar te zijn. Deze bevindingen kunnen voor een belangrijk deel verklaard en begrepen worden door de invloed van het nationaal-specifieke karakter van sociale kerninstituten in beschouwing te nemen.

**SOCIALE KERNINSTITUTIES IN NEDERLAND.** De institutionele omgeving van de Nederlandse aardappelsector kan als sterk faciliterend van karakter beschouwd worden met betrekking tot de ontwikkeling van samenwerking tussen bedrijven.

De betrokkenheid van de overheid is van het faciliterende type. De Nederlandse agrarische sector wordt ondersteund door substantiële overheidsinvesteringen in kennisontwikkeling en infrastructuur. Verder hebben Nederlandse aardappelbedrijven veel ruimte om via zelfbestuur initiatieven te ontplooien ter versterking en verdere

ontwikkeling van hun sector. Het financiële systeem in de Nederlandse agrarische sector is hoofdzakelijk van het kredietsysteem type. De toegang tot middellange en lange-termijn leningen stelt managers in staat om bij investeringen met lange tijdshorizonten te werken. Bovendien kunnen de Nederlandse managers in hun uitwisselingsrelaties met andere bedrijven vertrouwen genereren op basis van een formeel wetsysteem, persoonlijke reputatie en sociale controle. Tenslotte beschouwen de meeste managers van Nederlandse aardappelbedrijven individualistisch gedrag, in termen van het uitsluitend najagen van eigenbelang ten koste van anderen, als niet legitiem. Samenwerking wordt als een veel vruchtbaarder manier van werken beschouwd.

SOCIALE KERNINSTITUTIES IN HET VERENIGD KONINKRIJK. De institutionele omgeving van aardappelbedrijven in het Verenigd Koninkrijk is aanzienlijk minder stimulerend van karakter voor de ontwikkeling van samenwerking tussen bedrijven.

De Britse overheid heeft decennia lang de nationale aardappelindustrie gereguleerd via een quotasysteem. Een quasi-overheidsorganisatie zorgde voor de uitvoering van dit marktregime. Hierdoor was de overheid een belangrijke bron van (on)zekerheid voor de betrokken bedrijven. Het is zeer waarschijnlijk dat dit marktregime, dat pas in 1997 opgeheven werd, de ontwikkeling van samenwerkingsrelaties voor aardappelbedrijven irrelevant maakte omdat de afzet en aanvoer van aardappelen grotendeels door de marktordening gegarandeerd werd. De betrokkenheid van de overheid in de industrie veranderde na 1997 echter van het 'regulerende' naar het 'laissez-faire' type. De quasi-overheidsorganisatie die het marktregime uitvoerde werd opgeheven, maar daarna op aandringen van het bedrijfsleven in de (afgeslankte) vorm van een industrieorganisatie voortgezet. Het ontbreken van enige traditie van samenwerking en de toegenomen onzekerheid lijkt de bedrijven in deze omstandigheden te stimuleren om hun zelfvoorzieningsgraad verder op te voeren en de onderlinge concurrentieverhoudingen verder aan te scherpen. Het financiële systeem in het Verenigd Koninkrijk is van het 'kapitaalsysteem' type. Bedrijven zijn daardoor voor hun kapitaalbehoefte aangewezen op ingehouden winsten, korte-termijn leningen en, indien mogelijk, op de uitgifte van aandelen. Het gebruik van extern kapitaal vereist korte-termijn resultaten en dwingt managers om met een korte tijdshorizon te werken. Mechanismen om vertrouwen tussen zakenpartners te genereren zijn in het Verenigd Koninkrijk niet erg sterk ontwikkeld, wat de ontwikkeling van samenwerkingsrelaties bemoeilijkt. In het bijzonder de kleinere bedrijven hebben te kampen met de onzekerheden die het Britse 'case-law' systeem met zich meebrengt. Daarnaast vormen persoonlijke reputatie en



sociale controle geen relevante basis voor vertrouwen tussen bedrijven. Daar komt bij dat individualistisch gedrag, ofwel het najagen van eigenbelang ten koste van anderen een normaal verschijnsel gevonden wordt. Het is zeer waarschijnlijk dat dit de ontwikkeling van korte-termijn relaties en scherpe concurrentieverhoudingen stimuleert en pogingen tot samenwerking ontmoedigt.

TERUGKOPPELING NAAR DE PROPOSITIES. De resultaten van de vergelijkende studie ondersteunen twee van de vijf proposities die eerder op basis van het analysekader geformuleerd werden. De bevindingen over de Nederlandse aardappelsector weerspiegelen de vrijwel ideaaltypische propositie 1, terwijl de situatie die aangetroffen werd in het Verenigd Koninkrijk de andere extreme propositie, nummer 2, ondersteunt. De bruikbaarheid van de onderzoeksresultaten om de overige drie proposities te behandelen is beperkt. Dit komt omdat de twee 'nationale' cases de proposities ondersteunen die de extremen vertegenwoordigen van een continuüm waarop de overige drie proposities middenposities innemen. De behandeling van de overige drie proposities vereist daarom verder onderzoek.

## 7 Conclusies

De empirische bevindingen van dit onderzoek laten zien dat het karakter van sociale kerninstituties nationaal-specifiek kan zijn, maar ook specifiek kan wezen voor sectoren binnen een bepaald land. Het unieke institutionele karakter van de Nederlandse agrovoedingsindustrie ten opzichte van de nationale context als geheel illustreert dit. Deze observatie steunt de bevindingen uit eerdere onderzoeken die in de literatuur te vinden zijn en ook het argument dat kapitalistische systemen uitstekend onderzocht kunnen worden door analyses uit te voeren vanuit het perspectief van de industrie. Dit betekent echter niet dat daarmee het discours over nationale 'business systems' minder relevant is. Het betekent eerder dat vormen van samenwerking binnen bepaalde industrietakken of sectoren kunnen afwijken van de patronen die op nationaal niveau te onderkennen zijn. De resultaten laten ook zien dat de gecombineerde invloed van sociale kerninstituties met een nationaal-specifiek karakter de ontwikkeling van samenwerkingsrelaties tussen bedrijven in belangrijke mate kunnen faciliteren of juist ontmoedigen.

IMPLICATIES VOOR MANAGEMENT. Er is een aantal suggesties voor managers te formuleren op basis van de uitkomsten van dit onderzoek. In de eerste plaats kunnen



managers voordeel behalen door bij het ontwikkelen van hun strategische plannen rekening te houden met de 'fit' tussen de manier waarop zij hun relaties met andere ondernemingen inrichten en het karakter van de institutionele omgeving waarin zij opereren. Ten tweede kunnen managers het risico van falen van samenwerkingsrelaties in het buitenland verminderen door rekening te houden met invloeden uit de institutionele omgeving. Ten derde kunnen managers van bedrijven hun concurrentiepositie verbeteren door invloed uit te oefenen op het karakter van sociale kerninstituten die een directe impact hebben op de industrie.

IMPLICATIES VOOR DE AGRO-VOEDINGSINDUSTRIE. Er zijn ook gevolgtrekkingen te formuleren die relevant zijn voor bedrijven in de agro-voedingsindustrie. Door structurele verschuivingen in het karakter van sociale kerninstituten in deze economische sector veranderen de 'spelregels' voor het behalen van concurrentiekracht. In de Nederlandse agro-voedingsindustrie wordt het karakter van de institutionele omgeving steeds minder bevorderlijk voor samenwerkingvormen die decennia lang goed hebben gefunctioneerd, zoals coöperaties, brancheorganisaties en industrieorganisaties. De betrokkenheid van de overheid wordt steeds meer 'laissez-faire' van karakter en het financiële systeem lijkt meer richting het kapitaalsysteem te schuiven. Verder worden bedrijven door de toenemende globalisering van activiteiten en transacties meer en meer geconfronteerd met verschillende wetgevingssystemen. Hierdoor kan vertrouwen gebaseerd op ervaringen in het verleden aan belang winnen. Tenslotte is er een trend te onderkennen van afnemende solidariteit en toenemende individualisering onder bedrijven in de Nederlandse agro-voedingsindustrie. Deze verschuivingen dwingen het management van agro-voedings-bedrijven en in het bijzonder die van coöperaties om hun plannen en strategieën voor de toekomst te herzien. Want ondanks de verschuivingen naar een institutionele omgeving die minder bevorderlijk is voor de ontwikkeling van samenwerkingsrelaties, neemt het strategische belang van samenwerking eerder toe dan af.

IMPLICATIES VOOR DE AARDAPPELSECTOR. Net als vele andere branches en industrietakken wordt de aardappelsector in zowel Nederland als het Verenigd Koninkrijk meer en meer gedomineerd door grote multinationals. In het bijzonder de schaalvergroting onder grootwinkelbedrijven leidt ertoe dat concurrentieverhoudingen en spelregels veranderen. Angelsaksische concepten als 'preferred suppliers' en 'global sourcing' worden verder ontwikkeld en nemen in belang toe. Om concurrerend te

blijven moeten bedrijven daarom steeds meer investeren in kennis, productiecapaciteit en nieuwe producten en diensten om aan de wensen van hun afnemers te kunnen voldoen. Gegeven deze situatie hebben bedrijven in de agro-voedingsindustrie en in het bijzonder de aardappelsector de keuze om met hun afnemers mee te groeien, zich zeer sterk te specialiseren, of tot marginale spelers gedegradeerd te worden.

In de aardappelsector van het Verenigd Koninkrijk lijken de bedrijven onder deze omstandigheden een voorsprong te hebben omdat daar sinds de recente afschaffing van het marktregime de herstructurering van de sector versneld doorzet. Het lijkt erop dat zich daar een klein aantal zeer grote bedrijven zal ontwikkelen die, gefinancierd door aandelenkapitaal of investeringsbanken, op termijn hun vleugels naar het Europese continent kunnen uitslaan.

De Nederlandse aardappelsector maakt daarentegen een meer geleidelijke herstructurering mee waarin bedrijven in aantal afnemen en in omvang groeien. Of dit proces snel genoeg gaat om de internationale ontwikkelingen bij te houden is echter de vraag. Het lijkt erop dat een sterke eigenschap van Nederlandse bedrijven, het vermogen om samen te werken, ook een zwakte met zich meebrengt. Bedrijven lijken geneigd te zijn om hun autonomie te bewaren en daardoor relatief klein te blijven omdat ze gewend zijn om via samenwerkingsarrangementen de nadelen van hun beperkte afmetingen te compenseren. Het is echter maar de vraag of deze formule nog lang succesvol blijft. Gezien de 'sterftegraad' onder kleine en middelgrote bedrijven en de steeds minder faciliterende institutionele omgeving, lijkt het erop dat deze bedrijven het risico lopen om gemarginaliseerd te raken ten opzichte van hun grote, internationaal opererende klanten en concurrenten. Om in de toekomst concurrerend te blijven zouden de Nederlandse bedrijven daarom het beste van twee werelden na moeten streven. Dit komt neer op het benutten van de voordelen van het vermogen tot samenwerking en tegelijk het nastreven van een omvang die beter in verhouding staat met internationale marktpartijen.

**IMPLICATIES VOOR BRANCHEORGANISATIES.** De positie van brancheorganisaties en industrieorganisaties wordt bedreigd door de trend dat ledenaantallen dalen en de behoefte aan collectieve actie afneemt. Daarnaast neemt door de internationalisering van beleidsontwikkeling zowel de concurrentie als de behoefte tot samenwerking toe tussen nationale branche- en industrieorganisaties. Het is daarnaast waarschijnlijk dat organisaties met een internationaal ledenbestand aan belang zullen winnen. Desalniettemin blijft er een belangrijke taak voor, in het bijzonder, de Nederlandse



organisaties over. Zij kunnen helpen om te voorkomen dat de agro-kennisinfrastructuur aangetast wordt door het veranderende karakter van sociale kerninstituten en dat de Nederlandse agro-voedingsindustrie haar leidende rol verliest.

**IMPLICATIES VOOR DE OVERHEID.** De onderzoeksresultaten laten zien dat het karakter van de betrokkenheid van de overheid in de industrie een aanzienlijke invloed kan hebben op het relatieve gemak waarmee samenwerkingsrelaties tussen bedrijven tot stand komen. Er is ook aangegeven dat samenwerking tussen bedrijven van belang is om de concurrentiekracht van ondernemingen en industrietakken te vergroten. In dit verband kan de faciliterende houding van de Nederlandse overheid ten opzichte van de aardappelindustrie als *inspiratiebron* dienen voor toekomstig beleid dat samenwerking stimuleert, in tegenstelling tot de eerst 'regulerende' en nu 'laissez-faire' betrokkenheid van de overheid in het Verenigd Koninkrijk.

**TOEKOMSTIG ONDERZOEK.** Het huidige onderzoek kent de nodige beperkingen. Het is bijvoorbeeld de vraag in hoeverre de bevindingen gegeneraliseerd kunnen worden naar sectoren buiten de agro-voedingsindustrie. Daarnaast is de complexiteit van de fenomenen die bestudeerd zijn erg groot. Om die redenen zijn de onderzoeksresultaten overwegend exploratief van karakter. De bevindingen en beperkingen van deze studie geven daarom ook aanleiding tot verder onderzoek. Mogelijke onderwerpen en prioriteiten zijn: 1) de uitbreiding van de onderzoeksdatabase; 2) de uitbreiding van het analysekader; 3) de interactie tussen vertrouwen, macht, samenwerkingsverbanden en instituten; 4) de procesdimensie van de ontwikkeling van samenwerkingsrelaties - en in het bijzonder de managementaspecten hiervan - onder invloed van sociale kerninstituten; en 5) de rol van nationaal-specifieke kerninstituten op de ontwikkeling van samenwerking binnen en tussen multinationals.

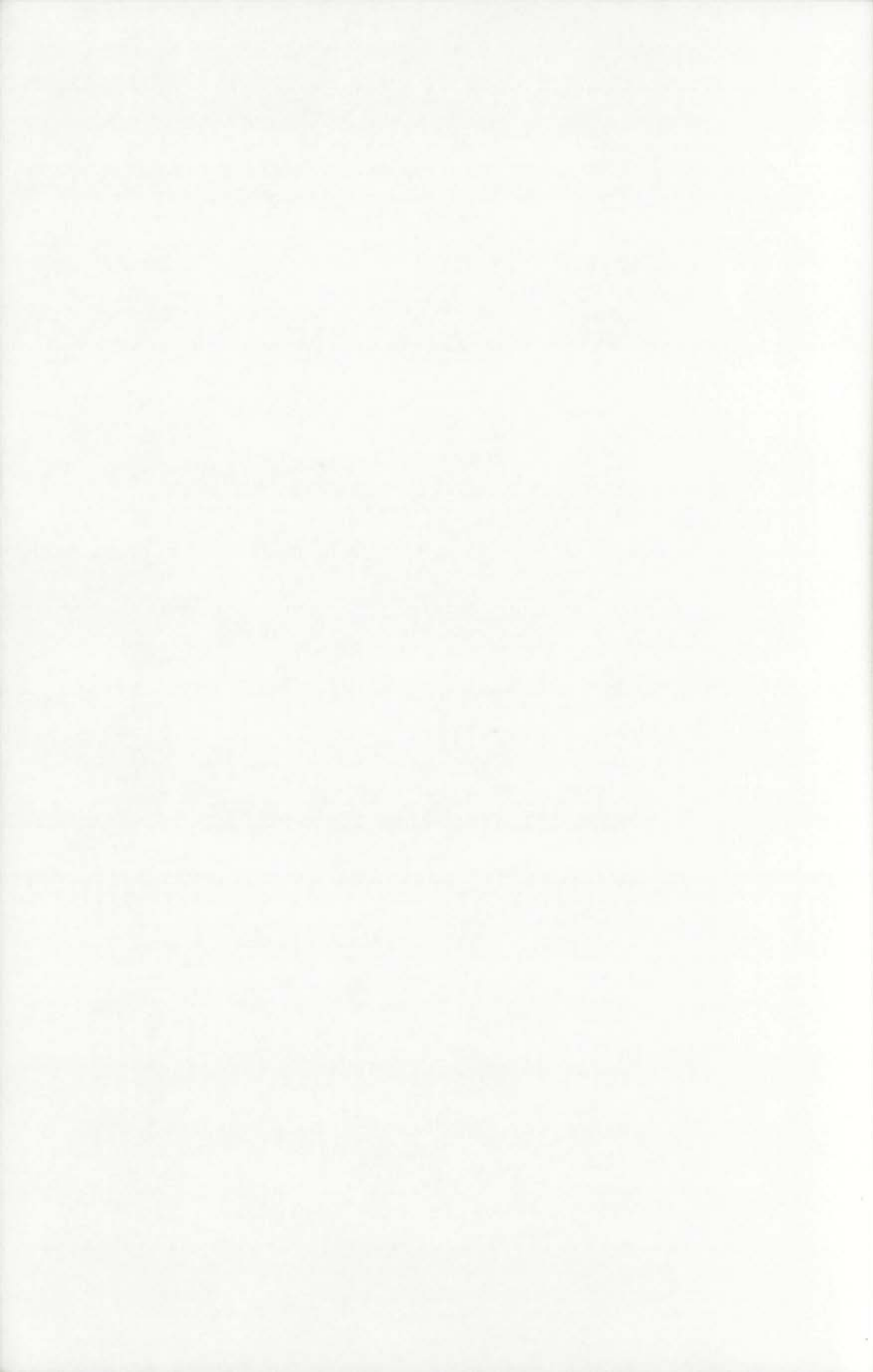
## 8 Afsluiting

Dit proefschrift heeft licht geworpen op de invloed van sociale kerninstituten, met een nationaal-specifiek karakter, op de ontwikkeling van samenwerking tussen bedrijven. De resultaten geven aan dat, ondanks de voortschrijdende globalisering van de economie, het waarschijnlijk is dat tussen verschillende landen vele verschillende systemen van samenwerking blijven bestaan. Kennis over dit onderwerp is van belang voor managers van bedrijven die op een internationaal niveau opereren en die in



toenemende mate afhankelijk zijn van succesvolle samenwerkingsverbanden in zowel de thuismarkt als in het buitenland. Desalniettemin valt er nog veel te leren en te onderzoeken over het bewerkstelligen van een 'fit' tussen vormen van samenwerking en de institutionele omgeving van bedrijven. Er is daarom behoefte aan verder onderzoek over dit onderwerp en, op basis daarvan, de ontwikkeling van management tools.

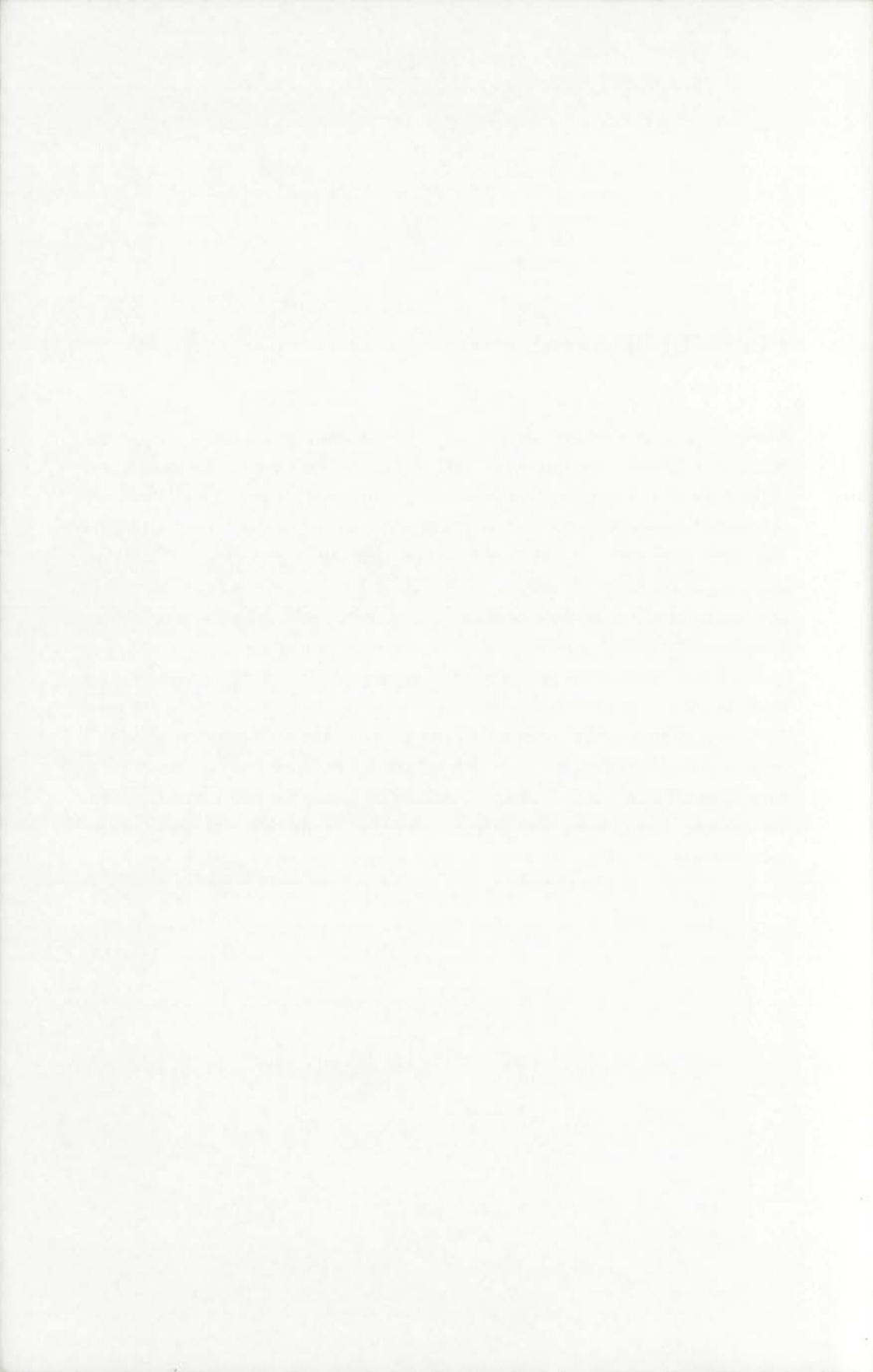






## CURRICULUM VITAE

Martijn Rademakers (Rotterdam, 29 July 1968) studied policy and organizational Sciences at Tilburg University from 1992 to 1995, specializing in management and organization. Before that, he enjoyed secondary technical education at LTS IJsselmonde Rotterdam between 1980 and 1984, continued with electrical engineering at MTS Zuid Rotterdam from 1984 to 1988, and studied electrical engineering and industrial marketing at The Hague Polytechnic from 1988 till 1992. In 1994 and 1995 he worked as a guest researcher at the Indonesian management institute Lembaga Pendidikan Pembinaan Manajemen in Jakarta. From 1995 onwards, he held a position as a research associate in the Department of Strategic Management and Business Environment at the Rotterdam School of Management, Erasmus University Rotterdam. Between 1995 and 1999, next to his research on inter-firm cooperation, Martijn Rademakers acted as a member of the Faculty council from 1996 to 1998. He has published on forms of inter-firm organization in Indonesia, the concentration process in the Dutch potato industry, the strategic developments and network formation in the UK and Dutch potato industries, and the role and functions of business associations in the agribusiness.









Stellingen

Behorende bij het Proefschrift

Managing Inter-Firm Cooperation in  
Divergent Institutional Environments:  
A Comparison of the  
Dutch and UK Potato Industries

Martijn F.L. Rademakers

Erasmus Universiteit Rotterdam

9 september 1999

## I

Marktideologie is een vorm van economisch deïsme.

## II

De voortschrijdende concentratie van de detailhandel in de Europese agro-voedingsindustrie brengt een verschuiving teweeg van marktwerking naar supermarktwerking.

## III

In een meer en meer individualiserende samenleving hebben mensen elkaar harder nodig dan ooit.

## IV

Dalende communicatiekosten veroorzaken een stijging van onzinnige berichten die uitgewisseld worden.

## V

Als patronen van bladnerven metaforisch zijn voor concurrerende organisatievormen, dan zijn netwerken van bedrijven belangrijke structuren.



## VI

AiO's zijn doorgaans jeugdiger dan hun leeftijdgenoten.

## VII

Als overleven een basiseigenschap van de mens is, dan varieert de wijze van rationeel gedrag al naar gelang de omgevingsomstandigheden.

## VIII

Aardappelen en kennis hebben als overeenkomst dat ernaar gewroet wordt.

## IX

Een gepromoveerde bedrijfskundige is nog geen bedrijvendokter.

## X

Het is zowel frustrerend als bemoedigend om te ontdekken dat de resultaten van jarenlang onderzoek uiteindelijk in enkele zinnen zijn samen te vatten.

