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**Externalities, Learning and Governance  
Perspectives on Local Economic  
Development**

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# Externalities, Learning and Governance Perspectives on Local Economic Development

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# 1. Introduction

In the late seventies, John Friedmann made an attempt to formulate a new paradigm for regional development. His basic proposition was that the then prevailing development paradigm had been dominated by functional integration (Friedmann and Weaver, 1979). The integrity of local territorial life had been surrendered in the interests of growth and efficiency. Efficient large-scale functional organisation meant centralisation at higher levels. The trans-national corporation was seen as the ultimate embodiment of this approach. In his view regional planning was at a crossroads; it would have to choose between function and territory. He subsequently formulated the development of territory as an alternative paradigm. As a guiding principle this was more egalitarian, distributive and integrative, including economic, social as well as political dimensions of development. Friedmann and Weaver's book received a mixed reception. One of the critiques was by Jos Hilhorst, my predecessor (Hilhorst, 1980). The formulation of function and territory as two opposites had, in his view, a number of basic flaws. Subsequent developments in the literature have proven Hilhorst to be right in a number of respects. The interaction between function and territory became, in the late eighties and early nineties, an important dimension of localised economic growth and embedded development.

It may seem remarkable that in the current era of the globalisation of activities, flows and markets, territorial embeddedness is receiving so much attention. 'While capital, raw materials, components and end products move rapidly and cheaply over the surface of the earth, only human beings and human social institutions seem to meet fundamental barriers to mobility and replication' (Maskell, et.al.,1998:179). The quality of labour, knowledge and social institutions have become fundamental to explaining local economic development.

The purpose of this paper is to examine some of the factors that have strengthened the interaction between function and territory. In this

paper I intend to review three factors, namely, external economies, processes of learning and collective learning and governance. I will begin with external economies, starting with the work of Paul Krugman, which has become known as geographical economics. Then I will examine the manner in which the 'New Industrial District' literature has conceptualised the contribution of external economies. After having pointed out some of common elements and key differences between these two different schools of thought, I will move to examine the second source of localised economic growth, namely processes of learning and collective learning. In order to do so, I will briefly elaborate on the evolutionary perspective. Processes of learning and collective learning take place at the level of firms and of networks of firms. Learning and collective learning can achieve higher levels of innovative capability when organised at the level of territory or the milieu. This brings me to the third factor, namely governance. Innovations in economic governance constitute one of the radical changes of our times. The 'modern' corporation was the focus of attention in the early and mid-20<sup>th</sup> century. In the last few decades inter-firm and extra-firm organisation have been subject to innovation. New institutional devices are based on the notions of product column, commodity chain, cluster and milieu. These innovations introduce new issues of economic governance not only at the level of the firm and industry but also at the level of territory.

In a final section, I will look at some implications for development policy. The more a local regional economy is capable of achieving greater coherence between changes required at the level of its firms and clusters and of the relevant local institutions, taking into account the needs of local population, the better it will be able to set out on or maintain itself on a sustainable development trajectory. In essence, local economic development is about developing and enhancing the performance of institutions, both functional and territorial.

## 2. External economies

### 2.1 A 'geographical economics' view

Krugman is one of the leading economists who have contributed to the growing recognition of the localised nature of economic growth. His work stands somewhat apart from that of others and has been given the label of geographical economics. He considers the incorporation of space as the fourth (and possibly final) wave of the increasing returns/imperfect competition revolution. The first came with industrial organisation, the second is new trade theory and the third new growth theory (Krugman, 1998a). He argued that to understand international trade, one must begin to understand why industries tend to concentrate geographically. Generally firms will locate in areas with the largest demand. Because of the potential for increasing returns, generated by economies of scale, firms prefer to supply other areas from this initial location. Sufficiently low transport costs will make this possible. The area of largest demand will draw other firms, which adopt the same logic, and this reinforces its attractiveness. Producers will prefer to locate there, where the demand is large and where the supply of inputs is particularly convenient. The agglomeration of economic activity reflects processes of cumulative circular causation whereby 'activities tend to cluster where markets are large and markets become larger there where activities cluster' (Krugman, 1995). Factor mobility further contributes to circular cumulative causation where centre regions grow at the expense of peripheral ones. The larger the potential economies of scale, and the lower the transport costs, the stronger will be the tendency towards agglomeration of production. Economies of scale are the principal cause of concentration. This phenomenon is considered to occur primarily at the inter-regional level, consisting of large economic units (Krugman, 1991a:70/1).

Krugman considered another process of agglomeration, namely, that based on external economies. This process occurs primarily at the local level. The author relies on the classical Marshallian type of

external economies. Firstly, labour market pooling. Agglomeration is attractive for workers with specialised skills as pooling permits them to switch employers, while firms are able to recruit additional workers. Under conditions of increasing returns to scale and knowledge uncertainty both can benefit'. A second source of external economies is generated by specialist inputs and services. Assuming economies of scale, specialist inputs can be made at higher scales in a cluster of firms. Thanks to the larger size, specialists can also support a greater range of inputs. These are called market size effects. They operate through both backward and forward linkages. The third source of external economies are knowledge and information flows. A concentration of firms facilitates the flow of information and knowledge exchange. These are considered to be pure or technological knowledge spillovers. Krugman excludes these from his models with the argument that knowledge flows cannot be easily traced. These three sources of external economy constitute centripetal forces that generate geographical concentration. Like Myrdal (1957) and other distinguished predecessors, Krugman recognises centrifugal forces, which tend to disperse economic activity. Here he refers in particular to immobile factors, to land rents and to pure external diseconomies (Krugman, 1998a, 1998b).

In his early work (Krugman, 1991a, 1995), Krugman stressed the importance of the market size effect as contributing to geographical concentration. In his more recent work, he expects this to be less important than other sources of agglomeration at least in as far as cities are concerned. 'Big cities may be sustained by increasing returns that are due to thick labor markets, or to localised knowledge spillovers, rather than those emerging from the interaction of transport costs and scale economies at the plant level' (Krugman, 1998a).

The specialisation of an area in a particular industry may itself be an historical accident. Whatever the reason for the initial location of a cluster, once a pattern of specialisation is established, increasing returns set in and the pattern of specialisation becomes 'locked in' by

cumulative gains from trade. There is strong path dependence in the pattern of specialisation and of trade. Trade and location are integrated.

If transport costs fell even more, firms could disperse, as the need to cluster would fall away. However, regions that have had a head start<sup>2</sup>, in the sense that specialisation in an industry is advanced, will attract industries and grow away from other locations with less favourable conditions. The lock-in towards greater specialisation also has its negative side, as we will see below.

The reduction of transport cost in effect may have asymmetrical effects. It will not debilitate concentrations of industries, which experience increasing returns and will be able to continue to grow. But lower transport costs will reduce the geographical protection offered by distance to firms in less favoured regions with smaller markets. The selective build up of transport infrastructure (towards dendritic systems) further reinforces this asymmetry.

The models designed by Krugman typically generate multiple equilibria, representing different 'imaginary histories'. Most, though not all, are two-region models. A small change in one of the critical variables, e.g. transport costs, can produce swift changes in the distribution of activities between the two regions, differentiating them into a core containing mobile industry and a periphery containing agriculture. Thus, some kind of spatial structure is spontaneously defined, usually with a highly uneven distribution of economic activity, in spite of initially similar natural endowments. Changes are qualitative and often discontinuous as a result of quantitative changes in underlying parameters (Krugman, 1998a:12).

When an industry happens to get a head start in a particular region, increasing returns may set in, which 'lock' the region into that growth path. It will continue to specialise in that industry. This specialisation has accumulative advantages but it may also have disadvantages. The region may 'overspecialise', organising all its resources and institu-



tions around that particular industry and this may in turn lead to a certain 'crowding out' of or lack of attention to other industries. Specialisation may make regions prone to random external shocks. Shifts in demand may render the entire industrial base of a region obsolete. The shifting of capital and labour to new industries represents a major investment for which they may deserve, according to Krugman, some compensation. Also the ensuing unemployment problem may call for a slower adjustment process. Thus, while specialisation may have advantages, vulnerability is the other side of the coin.

## **2.2 New industrial geography: industrial districts**

The literature on new industrial districts (NIDs) has its origin in the mid-eighties<sup>3</sup>. Amidst industrial decline, large-scale industrial restructuring and re-location of industries to low cost regions and countries, some regions in Europe and the USA demonstrated strong industrial dynamism, based on new flexible technologies and small and medium firms. Most of the initial NID literature draws on experiences of successful districts in Europe (such as the Third Italy or Baden-Wurttemberg in Germany). Subsequent research revealed the existence of clusters in a number of developing countries. Well-documented cases are found in Brazil (Schmitz, 1995a, and 1999b), Mexico (Rabellotti, 1995, and 1999), Peru (Visser, 1996, and 1999) and India (Knorringa, 1996 and 1999; Das, 1998; Cawthorne, 1995). Industrial districts span a diversity of sectors that range from basic consumer goods, such as shoes, clothing and knitwear, to intermediate products and consumer durable goods.

Piore and Sabel had a strong influence on the early formulation of the NID framework. They argued that mass production had reached its limits as the dominant industrial model. Flexible specialisation would be capable to challenge large-scale 'fordist' production (Piore and Sabel, 1984). The two models were seen as polar opposites whereby mass production uses special purpose dedicated machine technology, operated by semi-skilled workers. Specialisation, driven by this technology, increasingly refines the tasks of workers (de-skilling) in an

extended hierarchical internal division of labour (where the assembly line constitutes the organising device, hence the name fordist production). Re-tooling of these increasingly complex operations is time consuming and expensive and therefore production runs have to be very large. Homogeneous products and price competition are prevalent. In contrast, flexible specialisation is based on the manufacture of custom-made products using multi-purpose technology and flexible production methods, operated by skilled workers. Production runs can be small as re-tooling times are short and costs are low. As a result products can become differentiated. Innovation into product designs becomes a challenge and a way to avoid price competition. While 'fordist' production needs stable and homogenous mass markets, flexible specialisation thrives in rapidly changing and niche markets.

Large-scale fordist production is characterised by *internal* economies of scale and scope. Economies of scope arise with the variety of tasks within a firm or plant. The larger the unit the better these different tasks may be combined and recombined. Clusters of flexibly specialised small and medium firms, at the other extreme, derive their strengths from *external* economies of scale and scope. Rather than organising an entire production process within its own plant(s), a firm can opt to rely on other firms, which specialise in the manufacture of certain components or sub-processes and which are able to produce these in a variety of specifications. The firm can specialise in its own products, components or sub-processes, serving not only its own requirements but also that of the other firms. It is advantageous for small firms to specialise, and the division of labour between firms advances progressively. Inter-firm subcontracting constitutes the basis of sectoral specialisation. The gains from specialisation by individual firms generate externalities for the cluster as a whole and spill over into lower costs. In addition, the deepening of the division of labour within a cluster helps to generate external economies of scope. These arise when the variety of producers within the cluster increases, enabling new combinations of inputs generating new products.

According to Piore and Sabel, there were already a number of industrial districts where flexible specialisation had taken root in small firms and which had begun to challenge mass production. The success of the small firms was in some instances based on long traditions of craftsmanship in the manufacture of custom-made and design-intensive products. The emergence of new flexible specialisation technologies of automated machines permitted these firms to respond more flexibly to demand-based changes in product specification (cf Piore and Sabel, 1984; Sengenberger and Pyke, 1991, Pedersen et al, 1994).

Others recognise that large firms, facing growing uncertainty of demand in more competitive markets, also have to restructure as internal economies of scale and scope no longer sufficiently compensate for these risks. The firms then have several options. They can relocate production to low-wage regions and countries, giving rise to the so-called 'new international division of labour' whereby intra-firm trade constitutes a growing proportion of international trade. Another option would be to raise flexibility, through vertical disintegration. By externalising and subcontracting the production of diverse inputs, large firms can spread the risks of fluctuating and changing demand. This process, whereby internal economies give way to external ones through a progressive externalisation of the structure of production will, according to Scott (1988), lead to re-agglomeration and locational convergence of specialised producers. Vertical disintegration multiplies the number of transactions between firms, leading to higher transaction costs. Producers can counteract this by increasing proximity, giving rise to further spatial concentration.

There are, therefore, two routes towards (re-)agglomeration. One is via the growth of SME clusters. External economies, hitherto unavailable, emerge thanks to new technology. The other route is through the re-organisation of large firms. Here, internal economies generated within the firm give way to external ones. De-agglomeration of indus-

try only occurs when firms move away to low-cost regions and countries.

Soon doubts emerged about the capacity of flexible, specialised, small firm to challenge large-scale 'fordist giants'. Piore and Sabel and their followers were quite explicit about this. Others, like Williams (1987) and Asheim (1992), took more refined views (for more details, see Helmsing, 1999a). Suffice to state here that there are other ways of achieving flexible production than small-scale flexible specialisation; and these need not imply the disappearance of all internal economies of scale. Large firms may make use of flexible production methods, to reorganise their assembly systems, enhance organisational flexibility, decentralise production and increase labour flexibility. But even if large firms vertically disintegrate *production*, this does not imply the disappearance of economies of scale and scope in marketing, distribution and control. To put it differently, even if flexible specialisation constituted the end of 'fordism' as a particular form of organising large-scale production, it would not imply the disappearance of large firms.

Asheim makes the important point that flexible specialisation technology has made flexible production methods *also* available in the realm of small firms. 'A new feature in the history of capitalist industrial development is the opportunities opened for small firms to engage in diversified quality production where a high degree of flexibility and efficiency in the production of specialised (semi-customised or customised) quality competitive products are attained through a small firm's new ability to change promptly from one product or process configuration to another, due to the availability on the market of relatively cheap re-programmable computerised production equipment' (Asheim, 1992: 50). Flexible specialisation here has a restricted meaning and refers to 'this new form of production organisation, which, based on flexible multi-use production techniques and skilled workers, has resulted in a new competitive market situation for *independent* small firms' (ibid, p 50, emphasis mine).

Without referring to new trade theory, Storper (1990: 432) adds the interesting point that exports are a necessary corollary of flexible specialisation. The greater inter-penetration of markets that have become contestable as a result of liberalisation creates higher risks for existing producers. Flexible production is both the cause of the inter-penetration and contesting of markets as well as the effect in the sense that it induces further market differentiation and narrower product market niches. The market differentiation has the important consequence that producers are forced to expand into new geographical markets for these new differentiated products. They have to export in order to recoup the product development costs. Thus, if producers concentrate on a smaller segment of a value chain, they must expand geographically to maintain a similar level of output. This also contributes to increase the intra-industry trade share of international trade (Dicken, 1998).

### *Collective efficiency*

One of the issues that triggered the policy relevance of NID and perhaps also the imagination of researchers and policy makers, is the notion of collective efficiency introduced by Hubert Schmitz. (Schmitz, 1989, 1995b and 1999a). For him, agglomeration economies are less important. They are in a way 'old hat' and generally available to all firms in an agglomeration. More important is the fact that clustering permits firms to engage in different forms of joint action, which create *additional* advantages. Collective efficiency becomes a key feature of NIDs<sup>4</sup>. Special reference is made to inter-firm vertical cooperation (with suppliers and with customers) and to different forms of horizontal cooperation. Rather than stressing the *collective* interest representation of small firms (see below), Schmitz and others lay the emphasis on self-help organisation. Clustering would give firms the opportunity to organise themselves better, establish business organisations, set up common services and establish common institutions (e.g. norms and standards). In other words, it would permit them to organise themselves and provide critical services, which would otherwise not be forthcoming. Firms are too small

to 'make' these inputs themselves while, if dispersed, the market is too small for them to be able to 'buy' these inputs. Clustering solves this problem; that is joint action enables firms to generate collective services on a *non-market* basis. Externalities are generated by *deliberate and purposeful* joint action.

The creation of common institutions that lower transformation and/or transaction costs, such as the sharing of equipment, technology information centres, quality control, credit consortia, and common norms and standards for inputs and products can only be realised if a certain geographical concentration in the industry has emerged. It is important to note that this generates advantages, but these advantages cannot be easily seen as an initial *cause* of geographical concentration. Once geographical concentration has begun to organise itself *as a cluster* these untraded advantages may potentially be within reach.

More recently a further distinction has been made between 'passive' and 'active' collective efficiency. Active collective efficiency denotes joint action aspects in both production *and* distribution. As competition gets more intense passive collective efficiency is not enough. Firms have 'to shift gear' and seek inter-firm cooperation as a means to become more competitive (Schmitz, 1999a). Joint action may vary in terms of the number of participating firms (bilateral or multilateral) and may be oriented in a vertical or horizontal direction (Schmitz, 1999a). In his most recent work Schmitz continued to stress the importance of joint action but has become more appreciative of local external economies (Schmitz, 1999b). The latter may arise from continued private investment by firms in the cluster. The benefits spread through technological spillovers or seepage and the movement of trained workers to other firms. Contrary to neo-classical perceptions that such external effects would lead to under-investment, Schmitz argued that firms will continue to invest as they are not only providers of such external economies but also benefit from investments by other firms in the cluster.

Several authors have recently found that increased exposure to (new) competition induces firms to engage in more inter-firm cooperation (Rabellotti, 1999, Knorringa, 1999 and Schmitz, 1999). In most instances, this applies to vertical cooperation with suppliers and sometimes with contractors. Horizontal cooperation, required to increase efficiency at the meso-level, is less frequent. Catalysts are needed, as found in the ceramics industry studied by Meyer Stamer (1998). But potential catalysts do not always succeed in playing their role, as in the case of the state government in Rio Grande do Sul in relation to the shoe industry analysed by Schmitz (1999). It would seem appropriate to add that this inter-firm cooperation refers to more advanced clusters.

Collective efficiency contributes to economic performance. Rabellotti and Schmitz (1999) and Schmitz (1999a) observed a positive association between collective efficiency and economic performance of firms in clusters in Mexico, Brazil and Italy, using several performance indicators. Elsewhere, Schmitz argued that clustering may be one of the factors contributing to increasing returns to scale and to competitive advantage for firms in clusters (Schmitz, 1999b).

Another group of authors stressed collective efficiency through *collective* action (Sengenberger and Pyke, 1991; Spath, 1991) as a basis for (small) firms to overcome their disadvantages and pay less attention to spatial clustering and agglomeration economies. The point of departure of this group of authors is small enterprise development. The big problem for small firms is not 'being small' but 'being isolated': 'as individual firms, acting on their own, they are in a poor position to compete. They lack the resources and the economies of scale and scope normally available to large companies and they lack the political voice necessary for influencing their economic and political environment' (Sengenberger and Pyke, 1991:8). 'The main problem of small firms is their isolation and powerlessness, particularly in an environment aligned to large private and public enterprises' (Spath, 1991: 4). By joining efforts and pooling knowledge and

resources they can do better. Networking among small firms is crucial.

Sengenberger and Pyke distinguish between a 'high road' and 'low road' of industrial restructuring. The low road to restructuring is to meet stronger competition in markets by raising one's own competitiveness through lowering labour costs and by a deregulated labour environment. This form of destructive competition can be very successful. The alternative would be the 'high road' to restructuring, which is based on enhancing efficiency and innovation by better organisation, better mobilisation of resources and by safeguarding workers rights and wages. High labour standards would not only push firms to innovate but also make innovation possible (Sengenberger and Pyke, 1991). They argue that collective action on the part of business associations and trade unions can induce industry to take the high road and prevent destructive competition into the low road. This brings in again governance issues to which we will return later (how to avoid the temptations of the low road).

### *Differentiation within and between clusters*

By the mid-nineties, a first stock taking of the NID model, was conducted by Humphrey (Humphrey, 1995). He noted three important problems. Firstly most definitions were restricted to small firms. This has obscured the role that large firms play in districts. The emphasis on inter-firm relations has diverted attention away from researching the internal structure and dynamics of firms. As has been argued by many, externalisation and subcontracting is but one response to increased competition and uncertainty. Furthermore, entrepreneurial competence is assumed but cannot always be taken for granted in small firms. The industrial district model focused heavily on inter-firm relations within districts but failed to be specific on external linkages. Schmitz added that differences in firm size might have implications for the characteristic socioeconomic features of industrial districts, namely competition with cooperation, joint action, and embeddedness (Schmitz 1994). As argued earlier by Asheim, intra-district



firm dynamics may be altered when large firms emerge within clusters or penetrate clusters from the outside.

More recently, studies have come up with new evidence on differentiation between and within clusters. A number of them were published in a second special issue of *World Development*, which appeared in September 1999. Taken together, these studies contribute several important findings. First of all, there seems to be a growing consensus that there are many different types of clusters, not only in advanced countries (as elaborated by Markusen, 1996) but also in developing countries. New typologies of clusters are needed to deal with the fact that the alleged advantages of clustering and features of industrial districts are not always found. In reviewing African case studies, McCormick (1999) argued that there are at least three different types, defined in terms of stages in the clustering-cum-industrialisation process. The first is the (pre-industrial) 'groundwork cluster' in which micro and small enterprises dominate, many of which are survival oriented. Conditions are highly competitive, there are no internal economies of scale, while the lack of inter-firm relations prevents deepening of the division of labour. Cluster advantages are limited to market access. The second is the 'industrialising cluster', which is still primarily local market oriented but which contains more advanced units. Also, this type enjoys limited external effects. The third category is the 'complex industrial cluster', which contains firms oriented towards national markets and to exports. This cluster comes closest to the theoretical ideal type. Case studies record joint action in this type of cluster, albeit ad-hoc and on a limited scale. Most African clusters enjoy only (limited) passive cluster advantages. This classification bears some resemblance to the one proposed by Altenburg and Meyer-Stamer (1999), based on the examination of Latin American clusters. They proposed a three-fold typology. The first, the 'survival cluster' of micro and small enterprises, roughly combined the first two specified by McCormick. The authors also considered cluster advantages to be limited and largely passive. Their second type refers to more advanced and differentiated mass produc-

ers, which were typically established during the era of import substitution. Their third type has no counterpart in the African classification. It consists of clusters of TNCs. They draw on cases in Central America, especially Mexico, where NAFTA has triggered a re-orientation of foreign investment and attracted new foreign investment in the form of core suppliers. The Gamarra cluster in Lima, Peru, studied by Visser would fall in the first category, with firms enjoying primarily passive effects arising from local external economies (Visser, 1996). Visser's recent contribution confirms this. Firms primarily enjoy passive collective efficiency advantages in the transaction sphere (Visser, 1999). In this context it is important to add that external economies in the transaction sphere were found to have greater significance than those generated in the transformation sphere. The latter were absent or applicable to subgroups only<sup>5</sup>.

A second important finding of the recent studies is the fact that there is frequently considerable differentiation between firms within a cluster. Clusters are not homogenous in terms of firm characteristics, nor do they remain homogenous over time. Some firms benefit more from clustering than others. Agglomeration economies accrue, in principle, to all firms and hence are an unlikely cause of differentiation. The question therefore arises whether active collective efficiency helps to explain these differences. Studies by Rabelloti and Schmitz (1999) and Schmitz (1999a) demonstrate that there is a positive association between inter-firm cooperation as a component of active collective efficiency and the economic performance of firms in the researched cluster. This applies especially to medium-sized firms. Rabelloti and Schmitz found that large firms draw less on the cluster while small firms engage less in joint action. Knorringa, examining the footwear industry in Agra, India found market channels to be an important differentiating factor within the cluster (Knorringa, 1999).

### **2.3 Reflections**

The exchange and cross-fertilisation of ideas between Krugman and NID authors and economic geographers have generally been compli-

cated by differences in approach and by the manner in which the two have interacted<sup>6</sup>. There are important common features and complementarities between Krugman and the NID literature (cf. Martin and Sunley, 1996 and Boddy, 1999). Starting with the common features, both Krugman and NID stress the importance of clustering and draw on Marshall to identify the different types of externalities involved. The technological dynamism of clusters received little attention from Krugman and NID authors have only very recently begun to look into this (e.g. Asheim, 1996). Bell and Albu (1999) reviewed a number of NID studies and found these to lack a learning orientation. Furthermore, labour market externalities are identified by both, but the NID literature pays less attention to them. In fact, flexible specialisation was found to cause labour market segmentation.

Krugman emphasised the path-dependent nature of regional specialisation and pointed to the dangers of a lock-in when high levels of specialisation are reached<sup>7</sup>. Initially, the advocates of flexible specialisation heralded NID as a challenge to large-scale 'fordist' production. Since the mid-nineties more realistic positions have been taken. Clusters may be just a phase in industrial development.

There are complementarities, for example, in so far as Krugman connected clustering with increasing returns and with international trade. With regard to the former, only very recently, Schmitz (1999) has made an attempt to link collective efficiency with increasing returns. Certainly initially, the link between clusters and international trade received less attention in the NID literature. As observed by Humphrey (1995) the NID research was inward oriented, looking at what happened within the clusters, and ignoring their external nexus.

There are also important differences. The NID literature has unearthed a greater variety of traded externalities, emphasising particular transaction advantages. The emphasis of NID literature has shifted over time, giving greater weight to *untraded* externalities, those arising from collective efficiency and from historical and social

embedding. Krugman ignored these for reasons of methodology. A closely related point is that for Krugman external economies are sufficient. The NID literature attaches great importance to active collective efficiency: Joint action by firms and supporting public agencies and local governments. 'External economies cannot capture all effects of clustering because it refers only to unintended by-products of other firm's decisions' (Schmitz, 1999a).

What may be an 'accident of history' in advanced countries, studied by Krugman, may be a heavily structured 'product of history' in many developing countries, especially those with a colonial past. This is what 'old' centre-periphery theorists have been pointing out for many years, in a widely varied palette of theoretical strands and orientations. In any case, their analyses of centre-periphery structures were more varied and complex than the factors identified by Krugman.

Increasing returns and external economies confer to the constituent firms some specific local competitive advantages. However, Krugman is critical about the notion of competitiveness per se, as well as applied to countries or regions; the latter are not like corporations (Krugman, 1994). Others, in particular, new economic geographers, have however raised the question whether strategic trade policy can be employed to create such local 'competitive advantages' (e.g. Martin and Sunley, 1996). If clusters are proof of the working of external economies, then such clusters would help to define what industries should be supported. In this way the controversial trade policy issue of targeting may be resolved. These authors conclude that: 'In effect what Krugman seems to be suggesting, though he does not use the term explicitly, is that the only justifiable form of industrial (trade) policy is in fact regional industrial development policy' (Martin and Sunley, 1996: 282). Regional industrial policy would then have the potential to foster national competitive advantage. The latter had been already a broad contention formulated by Michael Porter (1985, 1990)<sup>8</sup>.

Last but not least there is a question which intrigued Krugman but which the NID literature generally took for granted. Why do clusters arise in the first place? For Krugman there is a general tendency to concentrate production so as to gain economies of scale, and large firms co-locate because of the external economies. Circular cumulative causation does the rest. The NID literature usually begins with *small* firm clusters. Less attention is given to the question why clustering occurred, that is before flexible technology made it possible for small firms to gain additional passive external economies and eventually organise themselves to develop active collective efficiency advantages. There may be other unrelated causes.

In this context it is interesting to reflect on the fact that Krugman builds on the work of Brian Arthur. In 1994 a collection of essays written by Arthur in the eighties appeared under the title of 'Increasing returns and path dependence' (Arthur, 1994). Arthur developed three mathematical models of agglomeration. In the first agglomeration is driven by external economies and the location of firms is interdependent. The other two models do not require this. In one the locational requirements of industries are independent of each other. Arthur showed that this might give rise to either geographical dispersal or concentration, depending on the specification of these requirements. Thus, if all firms require certain inputs, like the shoe industry requiring leather, they may co-locate in the vicinity of leather-tanning firms. The third and last is the 'spin off' model, where the growth of an industry and the generation of new firms is dependent upon the prior existence of firms in the same sector (entrepreneurial seedbed function). Irrespective of the initial (uneven) distribution, this model eventually leads to concentration.

In many developing countries markets are small, and the division of labour has not advanced very far. SMEs predominate alongside a few privileged large firms. For the small firms the 'spin-off' model may be more applicable. Geographical concentration may be an expression of *lack of access* to markets and of the peripheral positions of these

firms within the local economy. The key question is whether a geographical concentration, once it exists, can turn itself into an organised industrial district. This brings us to dynamic issues, which the early body of NID literature has largely ignored.

### **3. Learning and innovation**

#### **3.1 Introduction**

In the early 1980s Nelson and Winter formulated their evolutionary perspective on economic change. One of their central propositions is that firm behaviour can be explained by the routines they employ. Knowledge of these routines is the heart of understanding that behaviour (Nelson and Winter, 1982: 128). The more a routine involves tacit knowledge the more difficult it is to imitate it, let alone from a distance (ibid:124). Firms will try to codify their routines, so as to reduce the problems of replication. Codification detaches knowledge from its immediate local context, and makes it widely available. However there are limits to the degree to which such codification can take place.

Routines are changed when a problem occurs. That is when standard responses no longer work. But firms have limited search capabilities and are subject to bounded rationality. The implied learning may lead to incremental innovation as moving in small steps contains uncertainty. Furthermore, successful innovation draws on other existing and well-tested subroutines, further enhancing the incremental character. Learning processes are cumulative. Routines and learning introduce path dependence. 'The routines of today are based on those of yesterday, as much as those of tomorrow are related to those of today' (ibid).

This new evolutionary thinking gained influence in local and regional studies in the late eighties and early nineties. A number of new ideas were built up which together constitute an emerging new per-

spective on local economic development. Central to this build up were two issues. One was based on the proposition that tacit knowledge exchange needs spatial (as well as organisational or cultural) proximity. The second referred to the territorial context of processes of learning and knowledge creation. Collective learning became a new guiding concept. Emphases and analytical entry points varied. Some started from the perspective of firms, others drew on emerging literature on the national innovation system and gave this notion territorial hands and feet; Yet others developed the notion of 'learning region' and 'innovative milieu'. In the following subsections we will paint these theoretical developments in broad strokes as major features of a new emerging perspective on local economic development.

### **3.2 Learning and collective learning**

In the competence theory of the firm, a firm is defined as a repository of productive knowledge (rather than a nexus of contracts). Learning by doing is central to maintaining and renewing competencies. 'Core competencies are the collective learning in the organisation, especially how to coordinate diverse production skills and integrate multiple technologies... Core competencies do not diminish with use but are enhanced by it' (Lawson, 1999). In this view, product market competition is merely a superficial expression of a deeper competition over competencies. Conceiving the firm as core competencies suggests that inter-firm competition, as opposed to inter-product competition is essentially concerned with the acquisition of knowledge and skills (*ibid*).

Given rapid economic and technological change, firms need to develop a dynamic capability to renew, augment or adapt their competencies in order to maintain economic performance. Innovation and learning are central and involve combining diverse technological, organisational and market knowledge. Lawson and Lorenz (1999) elaborate on three central ideas from organisational learning. Firstly, that learning depends on the sharing of knowledge and that this knowledge is mostly tacit and embodied in organisational routines

and procedures. The second idea is that new knowledge depends on combining diverse knowledge. The third idea is organisational inertia. Firms may find it difficult to make effective use of new knowledge because they face resistance to changes in their existing routines and procedures in which knowledge is embodied. When diverse knowledge gets recombined the associated tacit knowledge must be made precise and discursive. This provides a basis for the redesign of routines, which in turn creates the new tacit knowledge needed to work under the new conditions.

Firms have a limited capacity to undertake a range of activities. Choices must be made. Complementary activities requiring similar knowledge may be best coordinated within the firm, while activities based on non-similar knowledge call for coordination through formal or informal cooperation between firms. Thus, when firms want to invest in new products or processes, as they may be forced to following heightened and 'new' competition after market liberalisation, they encounter problems because they lack the knowledge to efficiently undertake the complementary activities needed to produce and market them. Inter-firm cooperation becomes a key to address this issue. The authors therefore conclude that in regions where this complementary knowledge is available, firms have a better chance to learn and develop new routines and competences. Skilled labour, specialist services and inter-firm cooperation create a capability in a region or cluster to renew and augment the competences of firms. This requires a social context, and a common language and culture to facilitate exchange, and the region may provide these.

Camagni (1991) adopted a somewhat different approach. He argued that uncertainty lies at the heart of the problem. Firms employ different functions to cope with uncertainty. The local economic environment and networks can enhance the capacity of firms to do this. Camagni identified different gaps and ways in which firms develop functions, routines and procedures to address these. They suffer from an information gap, as information is imperfect and costly to collect.



There is an assessment gap linked to the hidden characteristics of inputs, components, production factors and equipment (the 'lemon' problem). There is a competence gap linked to the limited ability of the firm to process and understand information. In addition to these static sources of uncertainty, there are two dynamic sources, namely, uncertainty arising from imperfect foresight in assessing the outcomes of alternative actions and lastly, there is uncertainty arising from the control gap. That is to say the outcome of actions depends on the independent decisions of other actors over which the firm has little or no control. The firm develops functions, routines and procedures to cope with these different sources of uncertainty. It engages in search routines to collect data in particular formats. It engages in technological monitoring etc. It adopts screening and signalling functions to respond to market signals and for inspection of the characteristics of inputs and the certification of outputs. It adopts a trans-coding function by which it translates chaotic and unordered information into a language that the firm can understand (firm-specific knowledge). The decision-control gap is addressed by adopting firm-specific decision routines and management styles. Lastly, large firms may reduce the complexity of the external environment by engaging equity participation, acquisition and mergers. These are all measures *internal* to the firm. There are however two new ways by which firms can enhance their capacity to cope with uncertainty. One is through the local economic environment and the other is via inter-firm networks.

The local environment can complement the above-mentioned functions for the firm in a number of ways (Camagni, 1991). It becomes a milieu<sup>9</sup>. It can engage in the collective gathering and screening of information through informal exchanges between firms operating in the same markets and by public or the cooperative monitoring of markets and technical change. The milieu can perform a signalling function about the direction of the markets of local firms, in terms of product image, reputation, cooperative advertising and quality certification. It provides a collective learning process involving different channels: i) the mobility of skilled labour within the local labour mar-

ket; ii) technical and organisational interaction between suppliers and customers; iii) imitation and reverse engineering of successful applications of general purpose technologies; iv) informal knowledge exchange via 'cafeteria effects'; and v) complementary information and specialist services. Firms in the milieu can informally exchange decision routines and aspects of management styles through managerial labour mobility, and they can imitate decisions and/or engage in cooperative decision-making via business associations. The milieu can contribute to reducing the control gap by local decision coordination through interpersonal linkages (families, clans, business clubs and associations), better and faster circulation of relevant information, and better financial-industrial linkage. Last but not least, the local milieu facilitates the external nexus. This is especially important in terms of articulating the needs of the firms in the labour market, human capital formation and education.

In conclusion, the milieu reduces uncertainty by raising transparency, constrains opportunistic behaviour, gathers, organises and exchanges information, provides additional signalling and articulates the needs of firms. Learning takes place via supply chain linkages (supplier and customer relations), labour mobility and, last but not least, spin-off activity (Camagni, 1991, Lawson and Lorenz, 1999).

Proximity is central to the effectiveness of the milieu. Camagni gives several arguments for this. First of all, human capital resources are often highly mobile within the local area but quasi immobile with respect to other areas. Specialisation and geographical concentration provide a dense local labour market but offer few opportunities outside the area. Secondly, the interaction generates an intricate network of mainly informal contacts among local actors, creating an 'industrial atmosphere'. Synergy effects stem from a common cultural, psychological and often political background (Camagni, 1991:133/4).

The milieu is one mechanism of learning and of reduction of uncertainty. The network is another. It may be defined as 'a close set of

selected and explicit linkages with preferential partners in a firm's space of complementary assets and market relationships, having as a major goal the reduction of static and dynamic uncertainty' (Camagni, 1991:135). Thus, instead of exploiting local synergies and collective learning mechanisms, a firm engages in selective networking on a trans-regional or even trans-national basis. They engage in joint ventures, strategic alliances, consortia, technical cooperation, licensing and franchising arrangements and cross-commercialisation. In these ways firms obtain access to important complementary assets, markets and technologies without having to incur organisational or locational costs, and they also free themselves from the limits of localised (and internal) competence.

Which of these two new operators is adopted, milieu or network depends, among other factors, on the initial conditions in the area, firm size and structure, the degree of competition and cooperation, local industry dynamics and differentiation. In general, one could argue that patterns of learning are different for small firms than for large ones. Large firms are more autonomous, can mobilise internal resources, have their RandD budgets, can engage in strategic alliances etc. Small firms lack the resources to maintain a dynamic capability on their own and need to draw on external resources and support. This need not necessarily be public resources but can especially take the form of relations with other firms, large and small. Hence, for small firms the local milieu is an important mechanism for learning. The milieu is open-ended and relies on 'pure' externalities, while networks are selective and closed and turn externalities into club goods. From here the relative strengths and weaknesses of these two new operators can be inferred. The milieu, involving larger numbers of participants, is relatively stronger in dealing with monitoring, assessment and transcoding of information, while networks, more selectively composed, are more effective in relation to decision and control gaps.

To summarise, the presence of local collective learning enhances the capacity of local firms to learn to adapt and to innovate. In comparison to other firms, they can tap a larger resource base and draw on additional local processes to renew and augment their competences. The local milieu offers a local capability for sustained competitive advantage. Foss (quoted by Maskell and Malmberg, 1999) argued that there are two requisites for this to happen. Firstly, that the local capability cannot simply be purchased and transferred elsewhere (it would have to be regionally specific) and, secondly, that it cannot easily be replicated elsewhere (imperfect imitation). Capabilities rooted in a person or in a firm may be easily bought, but capabilities residing in inter-personal connections and in localised inter-firm networking cannot. With regard to the question of replication, Maskell and Malmberg argued that the creation of regional or local capability entails tacit knowledge that goes with any (codified) knowledge creation. This tacit knowledge prevents perfect replication, in spite of the potential global distribution of the relevant codified knowledge.

### ***Local regional competence for collective learning***

Lorenz goes one step further. He argued that if firm-level learning takes place to overcome coordination problems, then 'regional collective learning can be understood as the emergence of basic common knowledge and procedures across a set of geographically proximate firms which facilitates cooperation and the solution of common problems' (Lorenz, 1999:320). Central factors are: i) a common language for talking about technological and organisational problems; ii) shared or partially overlapping technological/engineering knowledge; and iii) shared organisational knowledge on how to manage and divide responsibilities and modalities of collective decision-making.

Preconditions for collective learning are common, regional, culturally based rules of behaviour, a language of engagement and collaboration, and accepted but tacit codes of conduct between firms, which enable the development of trust, itself essential for innovative collab-

oration. Often a local 'collective agent' of some kind plays a pivotal role in enhancing these preconditions.

In Lawson's term the milieu acquires its own competences. These are understood here as emergent properties of social activity. 'Some level of organisation can be said to be emergent if there is a sense in which it has arisen out of some lower level but is not reducible to it or predictable from it' (Lawson, 1999:157). Regional competencies arise out of the interaction between individuals and organisations. Processes of labour mobility between organisations, birth and death rates of firms (via spin-offs or vertical disintegration of firms) fall outside the purview of firm-level competencies but become central to the analysis of regional competencies. They all have spatial proximity in common. 'Taking all these factors together, the region, as a productive system, may be differentiated as an ensemble of competences that stretches both through space and across organisations, and contains a degree of coherence in virtue of the nature of (localised) interaction constitutive of it' (Lawson, 1999:157)

### **3.3 Innovative milieu**

The innovative milieu has its analytical roots in the early eighties especially in the French School, which sought to describe the transformation of the spatial structure in France, where old industrial regions were declining in the north while new regional economies were rising in the south. Peripheral regions acquired their own dynamics, leading to territorially integrated forms of production organisation. The processes of collective learning were expected to be behind this and involved not only firms, but also other actors, such as universities, local authorities and intermediary and support organisations. '...in certain regions there are innovative milieus – that is, sets of local players who, on the basis of similar or complementary know-how, have developed a convergent perception of the requirements and opportunities that have arisen in their technological and market environment, and have developed jointly and interdependently the rules of competition/cooperation that accompany them' (Maillat, 1995:158)

Milieus were seen as social incubators of innovation with the competence to implement and to bring them to fruition. The conceptual development draws on the GREMI group of researchers of whom Camagni is one of the leading exponents. 'The milieu is a collective operator which reduces the static and dynamic degree of uncertainty facing firms by tacitly and explicitly organising functional interdependency of local players and by informally performing the functions of search, transmission, selection, transcoding, transformation and control of information' (Maillat, 1995: 160). The milieu represents the role of a production system, which itself is more than the sum of networked firms, a technical culture and other players. The milieu is a product of two logics. One is the functional logic of industrial organisation (e.g. as corporate strategies) and the other is the organic integration of the territorial production system as a whole. The innovative milieu generates the processes by which these two logics meet.

A milieu must, according to Maillat, have certain properties. There must be a collection of players consisting of firms, research and training institutes, and local authorities, which must have relative decision-making independence and relative autonomy in making strategic choices. There must be an interaction logic that derives from cooperation: players must be interdependent in order to take greater advantage of existing resources. There must be a learning dynamic, that is manifested by the players' ability, formed over time, to modify their own behaviour and to implement new solutions to achieve changes in their environment.

A milieu becomes *innovative* when local actors begin to exploit advantages of collective learning and to adjust their own actions to that end. Thus, when 'interactions amongst economic agents develop as they learn about multilateral transactions that generate innovation specific externalities, and as the learning processes converge towards increasingly efficient forms of joint management of resources' (Maillat, 1995:161). A milieu becomes innovative when it has become capable of organising its resources and coordinating and link-

ing economic, cultural and technological structures, thus creating new ways of productively combining these resources. Innovative capability depends not only on new combinations of existing resources but also on linking up with external resources. In other words, the milieu must develop the higher order competence to open up to the rest of the world and mobilise external resources.

### **3.4 Evolutionary trajectories of local economic development?**

Researchers have been preoccupied with the question of the long-term sustainability of NIDs. Cluster may decline, from within, as a result of internal differentiation processes, as some firms are likely to be more successful in capturing the gains of NID than others; internal and/or external acquisitions and mergers, under the impact of heightened competition, can cause further internal differentiation. What are the dynamics of industrial districts, what trajectories are possible? There is general agreement that one of the major changes affecting clusters is the increasing international competition as countries open up their economies. What is the capacity of a cluster to respond to external changes and what is the role of external agents? Humphrey (1995) suggested in that context using the notion of global commodity chains. Global chains organise global markets and a distinction may be made between producer driven and buyer driven chains. The former coordinated by large manufacturing firms, while the latter are coordinated by large retailers and trading companies. The global chains consist essentially of sets of networks, some of which may be extended into existing industrial districts. 'The trajectory of development of the cluster will be the outcome of an interaction between the firms and institutions in the cluster and the other elements in the commodity chain. Whether or not insertions into a commodity chain will create development potential for a cluster will depend on both its position in the chain and the capacity of firms and institutions to make use of or create sources of competitive advantage and opportunities for upgrading' (Humphrey, 1995:158). The kind of integration varies by type of chain, and according to the demand characteristics of the products. The sustainability of a NID depends on the external nexus

and oyd implications at the level of the industrial organisation of the cluster.

Others considered the endogenous technological capability of NIDs essential. If technological change and innovation are the driving forces of competition, how do SMEs acquire such capability? Authors such as Asheim, (1996) and Capello, (1999) and others draw on collective learning as the key to SME endogenous innovative capacity.

According to Asheim (1996) the early version of NID emphasised the traditional Marshallian features. That is to say, by clustering small firms compensate for their lack of internal economies of scale. By specialisation and deepening the division of labour, each firm replicates specialised activities integrated within the organisation of a district, gaining external economies of scale. This is, in Asheim's view, a rather fordist conception and too much centred on static locational efficiency. Such a system would be able to generate incremental technical change along the existing technological trajectory (benefiting from economies of scope). However, once such extended division of labour has been achieved there is the real danger of 'lock-in', where firms would lack the required flexibility for more radical change and be unable to change course. Furthermore, once locked-in, the district as a whole may find wage competition more convenient and a less risky option to maintain competitiveness. This would mean that the NID would fall back into the 'low road of industrialisation'.

To prevent itself from falling into that trap, a NID would have to increase its technological capability and transform into a 'learning region'. Collective learning would be the answer for small firms. In addition to learning-by-doing and learning-by-using, collective learning would enhance learning-by-interaction. In essence, this would require the transformation of an NID along three axes. First of all, organisational changes within firms. Theories of learning and innovation, as well as the theory of new competition (Best, 1990), stress internal changes to a flat type of organisation, with new styles of man-



agement and management concerns (including TQM), new forms of work organisation and human resources management. Inter-firm relations constitute the second axis. Porter (1990), Best (1990) and others have pointed to the development of inter-firm relations as the core organisational change constituting a driving force towards innovation and competitiveness. Not all types of inter-firm relations are conducive to learning. Horizontal (user-producer and producer-client) relations are more conducive to learning than vertical subcontracting (Asheim, 1996). If the intensity of horizontal interaction in a district grows, learning by interaction may emerge. Once such a process is set in motion, the quality of the relationships can develop further, based on accumulated trust, sharing information etc. Relational contracting may emerge, as both parties invest further in their relationships. The third axis, according to Asheim (1996) are the relationships between the firms and the local regional economy and society. Here the author refers primarily to the interaction between firms, universities and training centres and local public institutions<sup>10</sup>.

A more expanded analysis comes from Capello (1999). She starts from a distinction between firm-level learning and collective learning. Within the firm the continuity of learning is assured by the R&D function. At the level of the territory, low labour mobility outside the milieu and stable linkages with suppliers and customers assure continuity of collective learning. Dynamic synergies are generated by functional interaction within the firm and through tacit knowledge transfer. Dynamic synergies are generated when there is a high turnover of workers between firms within the milieu, as well as by innovative cooperation in the production column and through local spin-offs. For small firms this collective learning is essential. They gain from it, but also contribute to it. There is information and knowledge seepage (via informal channels and labour mobility) as well as consciously pursued exchange via supplier-user/client interaction. 'Knowledge gets socialised independent of the original will or intention of the inventor (...) Interactive linkages are the reasons for their long term permanence and strategic importance. They help define the

technological trajectory of the milieu by setting in motion a positive circular relationship between the identification of needs and the generation of new stimuli and ideas for the satisfaction of those needs which feed both process and product innovation' (ibid: 356).

In her view collective learning is *not* the result of the conscious co-operative behaviour of local agents. There may be a lot of imitation, reverse engineering, technological upgrading of products and processes as well as radical innovation that occur independently of the will of the original creator. What may be consciously pursued are individual strategies of agents to deliberately exploit 'innovations in the air'. Collective learning is more like a club good. By contributing to it, one gets access to all benefits, and it is up to individual firms to exploit this.

According to Capello one may distinguish certain preconditions that define the transition from one form of local development situation to another. A geographical concentration, which may have emerged for whatever reason, may become a specialised area or a cluster if stable SME linkages emerge and once a stable local labour market has developed. If these conditions are not satisfied, the area is likely to remain diversified and lacking specialisation. A specialised area may develop into a district when organisational and cultural proximity emerges. Such proximity and mutual acceptance of certain norms of reciprocity and respect contain opportunism and moral hazard and contribute to the reduction of transaction costs. Cooperation may emerge alongside competition. Deepening of the division of labour generates further economies of scale and scope leading to further integration. A full Marshallian district can grow. Such a district may develop into a milieu if innovative synergies emerge between local firms and through the labour force. Collective learning begins to enhance the innovative capacity of the area. Once local actors realise the potential of collective learning and begin to exploit its advantages, as demonstrated by organisational innovations at the level of firm,

network and level of governance, then one has reached the stage of an innovative milieu.

### **3.5 Specialisation, localised learning and global markets**

Maskell et al. (1998) and Maskell and Malmberg (1999) frame their thought provoking contribution in a local-global context. What is the role, if any, of local capability in a world that is globalising? Their central contention is that 'knowledge creation of even the most globally oriented firm or sector is, at least to some extent, influenced by differences in the economic properties of their place of location. Firms are progressively stimulated by and dependent on localised capabilities in order to maintain and increase their competitiveness precisely because of the drive towards globalisation and the resulting homogenisation of formerly critical factors of production' (Maskell and Malmberg, 1999: 168).

Maskell and Malmberg adopt an evolutionary perspective. They use the distinction between tacit and codified knowledge and the association between the two. Tacit knowledge requires cultural and spatial proximity; and sharing the same values, background and understanding of implied technical and commercial problems. They argue that the character of knowledge creation and transfer is changing as a result of globalisation. Globalisation allows codified knowledge to be more easily accessed anywhere across the globe. In effect, previously localised capabilities and local production factors are becoming ubiquitous. Such ubiquitous factors cannot be the basis of local capabilities because of the likelihood of someone else obtaining them at a lower cost. In effect, the ubiquitification of knowledge, together with the internationalisation of factor and inputs markets; destroys local capabilities.

According to Maskell and Malmberg, one must look therefore for other explanations as to why patterns of specialisation of industries continue to be stable in many countries. In their view, the locally embedded tacit knowledge becomes a crucial source of localised

capability. These tacit knowledge differences between localities, regions and countries cannot easily be washed away by globalising markets. 'Both the formation of the world market and the process of codification increases the importance of heterogenous, localised capabilities for building firm-specific competences and thus for variations between firms in competitiveness' (Ibid: 172). In a knowledge-based economy localised capabilities increase the 'ability of firms to create, acquire, accumulate and utilise knowledge a little faster than their cost-wise more favourable competitors' (Maskell et al, 1998:51).

Localised capabilities are developed from four sources: i) infrastructure and built environment; ii) natural resources of the area; iii) specific institutional endowments; and iv) knowledge and skills available in the area. All four are moulded by history.

Maskell and Malmberg single out institutional endowments and knowledge and skills as the crucial factors. Institutional endowments are defined in an all-embracing manner. They 'embrace all the rules, practices, routines, habits, tradition, custom and conventions associated with the regional supply of capital, land and labour and the regional markets for goods and services. It also includes the entrepreneurial spirit, moral beliefs, political traditions and decision making practices, culture, religion and other basic features' (Maskell and Malmberg, 1999: 173). Institutional endowments, thus defined, are a product of history, of previous rounds of economic activity, and set the stage for new rounds of localised knowledge creation. In a strong evolutionary argument, they state. 'The regional institutional endowment might be created, transformed, eroded and recreated through the economic history of the region, but at each point in time it has a directional effect on the efforts of firms [and other local actors] in the region by supporting and assisting some types of knowledge creation while hampering and preventing others'. 'The institutional endowment simultaneously spurs and confines the development of firms in the region, thereby exerting a strong – but not deterministic – influence on the future of the region' (Ibid: 174).



How are these localised capabilities created? One important mechanism is the 'first mover advantage'. The original location may be accidental (or not) but once in place the specialised demands from the firm will influence the future development of the localised capabilities, making it advantageous for the industry to remain in the area, and for outlying firms to relocate' (Maskell et al, 1998: 57). The emerging pattern of industry agglomeration and regional specialisation must be seen as the result of the evolutionary process of selection: areas that have suitable local capabilities can better serve the needs of firms and thereby give them a better chance of survival. As the industry grows, more institutional development to suit these firms, for example in the areas of hard and soft infrastructure, training of the workforce etc, augments the competitive advantage of the area. A further mechanism is that new firms will reproduce and reinforce the existing industry profile. Local entrepreneurs will move into this industry because during their lifetime they gain industry-specific knowledge and experience, and establish contacts with other firms and with local institutions that are important for the survival of their new firms. New firm formation and relocation of existing firms into the area enhance path dependency and positive feedback loops, for example, through the existence of local suppliers, services and the attraction of buyers. A third mechanism is triggered by positive feedback loops arising from internal economies of scale and from agglomeration economies. Maskell et al. stress the importance of knowledge spillovers for localised learning. Other positive feedback comes from transaction cost advantages. They refer to governance and higher level regional competence, when they argue that goal congruence within a cluster can be achieved through: i) family and quasi-family ties between firms; ii) common or industrial group ownership; iii) interlocking directorships; and iv) partial equity stakes and/or national/regional patriotism

Ideally, localised capabilities must be valuable, rare, not easily substituted and imperfectly imitated. Three mechanisms contribute to this. The first is what Malmberg and Maskell call 'asset mass effi-

ciency'. 'Regions that have a large stock of R&D and experienced-based knowledge, and a specialised labour force or infrastructure are often in a better position to make further breakthroughs which add to their existing stock of knowledge than regions which have a limited initial endowment of such factors' (Malmberg and Maskell, 1999: 176). A second mechanism is 'time compression diseconomy'. This basically implies that it takes considerable time to imitate institutional innovations and make them work, which discourages attempts to copy. Thirdly, local learning is characterised by inter-connectedness of asset stocks. That is to say, it involves a complex web of links across national, regional and local institutions as well as between institutions at each level. Thus, being able to reproduce one subset will turn out to be inadequate, as one will soon discover that other conditions need to be fulfilled as well<sup>11</sup>.

Localised capabilities do not confer permanent advantage. 'Regions (must) rebuild obsolete structures, renew exhausted resources, restore decrepit institutions, revitalise outdated skills and replace inadequate knowledge' (Maskell and Malmberg, 1999: 178). Deterioration may result from reduced demand for the products of the industry. Ubiquitification of industry knowledge and of production factors and imitation elsewhere may erode local advantages. Asset erosion may also be endogenous when there is a lack of new rounds of investment, ageing and a gradual redundancy of skills, bureaucratisation of institutions (which lose their sense of mission), and the breaking up of (knowledge creating) public-private partnerships under the impact of privatisation. Capabilities may deteriorate due to substitution (e.g. IT) or lock-in. This occurs when previously successful institutions and firms resist change. As Olson argued many years ago, distributional coalitions of interest groups may appropriate gains and oppose change. Local elite, managers, trade unions and politicians may form alliances that prevent structural change in declining industries.

In contrast to popular opinion Maskell et. al. conclude that 'ongoing internationalisation might lead to more embeddedness and to depen-

dence on specific institutions at local regional and national level rather than make all industries footloose' (Maskell, *ibid*).

### **3.6 Collective learning in the South**

In comparison to clusters and districts, there are very few studies on localised learning and innovation in lower and middle-income countries. Hence it may be too early to judge the degree to which this perspective can assist in understanding local economic development. At first sight and perhaps subject to gross oversimplification, conditions in many of these countries do not seem very conducive. The industrial structure in many countries is characterised by a low degree of division of labour, with relatively few firms in individual market segments. Often a few large firms dominate. At the same time there is no middle segment and a large number of undifferentiated small producers, often concentrated in 'pre-industrial' clusters. Problems of trust and fragmented markets further complicate the emergence of inter-firm relations and subsequent learning.

Import-substitution processes pre-empted the need for learning as technology was adopted 'lock, stock and barrel' from advanced countries and markets were heavily protected, reducing the need and incentive to improve products to suit local demand (Helmsing, 1993). Firms were vertically integrated, incorporating the manufacture of some inputs and internalising key producer services, and importing the remainder. Few were concerned about marketing, and many experienced 'seller's markets'. Few firms were 'world class' or regional market leaders. Most were imitators in a technological sense and national innovation systems were weak. Low incomes meant that the role of 'demanding customers' was limited anyway. Moreover, relatively affluent local people imitated western lifestyles, thereby enhancing the first mover advantage of firms from the West.

After structural adjustment had liberalised international trade and domestic markets, firms in these countries became exposed to international and 'new' competition. In many countries structural adjust-

ment had enhanced (or at least not diminished) the turbulence of the macroeconomic conditions. In these circumstances of heightened uncertainty, vertical disintegration became a very risky strategy. Meyer-Stamer (1998) studied firm-level strategies in the textile, engineering and ceramics industries in one state in Brazil. He found that firms initially persisted in vertical integration. Even though inefficient, it insulated them from the turbulent economic environment. Vertical disintegration would have made firms dependent on many other suppliers of inputs and service providers. As competing imports began to bite, many firms began to lose their market share. Only in the ceramics industry did a process of collective learning begin thanks to the role of the local business association (Meyer-Stamer, 1998).

My own research in Bulawayo, Zimbabwe, also demonstrated that many firms resorted to strategies of 'belt tightening', 'economising' and 'accepting lower profit margins', rather than engaging in more innovative strategies (Helmsing, 1998a). The periodic economic crises, caused by recurrent droughts, had turned defensive strategies into accepted and effective routines, at least for as long as a drought would last. After liberalisation, more innovative strategies were required. The local situation in Bulawayo is still far removed from the conditions of an 'innovative milieu' (ibid).

The problem for countries in the South is how to prevent a 'lock-in' into a role as low-wage producer, based on production platforms for TNCs. Upgrading is a necessity in order to generate higher wage employment. At the same time there is always the possibility that another country, in a 'race to the bottom', will offer even lower wages. The problems of upgrading remain real.

The notion of collective learning offers exiting new avenues for theory and policy but we need to know more about preconditions in developing countries. Few areas will meet the conditions necessary for an innovative milieu. Due to historical industrialisation paths, most industry is concentrated in capital cities and sometimes, other



larger cities. In these places the physical infrastructure is relatively better, there are universities, training institutes and specialised producer services, and there is a relative concentration of firms. At the same time, many experiments are going on, some with good and others with mixed results. For example, Humphrey and Schmitz (1996) related the case of Sercotec in Chile, which supported 'proyectos de fomento' of groups of enterprises. Schmitz (1999b) related the case of the footwear cluster in Brazil, where internal differentiation was already advanced. Some larger firms succeeded in linking up with North American markets (or rather they were 'handpicked' by USA trading agents). Because they supplied large retail chains, they were not interested in putting their contracts at risk for a new collective learning experiment in design in which many other and smaller firms would also participate. Several NGOs in Latin America engaged in promoting economic activities organise 'bolsas de subcontratación' (subcontracting fairs) where small producers can demonstrate their products and bid for contracts. They receive technical advice on how to improve their products. In Colombia, the government supported the creation of Competitiveness Boards, set up by business associations and local intermediary organisations (including training institutions) and local and departmental governments to promote technical and organisational innovations. While processes of collective learning may present an important avenue for the upgrading of local producers, we know as yet too little about collective learning processes in local contexts of countries in the South, or about their effectiveness.

## **4. Governance**

### **4.1 Introduction**

Economies are rapidly increasing in complexity. Firms not only depend on their own capacity to cope with this complexity, but draw on other firms and support institutions as providers of inputs and services and as sources of learning and innovation. Problems of coordi-

nation have multiplied, while uncertainties about outcomes have increased. In order to reduce or to cope with these and associated problems (such as information asymmetries, moral hazard and opportunism), governance becomes a critical issue. This general argument can also be extended to the local level. Scott and Storper (1992) formulated it as follows: 'Regions in which (such) coordination is weakly developed and in which unregulated competition prevails, face many problems and predicaments that compromise long-run viability. These regions are all the more vulnerable because, in a world of contested markets, they find themselves faced with competitors based in regions that provide effective regulatory and coordinating services' (Scott and Storper, 1992:22). In other words, the viability or strength of a regional production system depends as much on the firms as on the local regulatory, coordinating and supporting institutions and the way in which they interact. Systems that are better able to handle these problems, have a greater capacity for timely adaptation and this allows them to maintain a growth trajectory. New forms of governance are required, both industrial and territorial.

The field of industrial governance has undergone rapid changes. New core concepts are networks (Thompson, 1991, Hakanson, 1989), commodity chains (Dicken, 1998), production systems (Storper and Scott, 1992), clusters (Porter, 1990, Schmitz, 1989) and business systems (Whitley, 1992). Relations between firms have been conceptualised in a great variety of ways.

One can distinguish different logics and scales. On the one hand, sector level organisation, consisting of producers' lobby groups, provide common services and engage in self-regulation. On the other hand, there is organisation at industry level, which consists of different types of producers involved in one production column or commodity chain. An industry may cut across several sectors. The size or scale of such an organisation may vary considerably. It may be highly selective, specific to a limited number of firms, or seek to be broadly representative of all relevant firms. Below I will raise a number of issues

in relation to industrial governance as they relate to theories of local economic development.

Secondly, territorial in general or local governance in particular has entered the scene of economic development. While two decades ago central government was considered to be the principal actor, this changed rapidly in the late eighties and early nineties. The NID and learning literature in particular has emphasised the role of local and regional governments in cluster development and in creating an innovative milieu. This recognition is important but should not lead to a certain kind of myopia, a failure to take account of other dimensions, especially at industry and at national levels. In the following subsections, I will attempt to highlight some key issues in an effort to unravel the governance of local economic development.

#### **4.2 Governance of inter-firm relations**

Three specific issues have received considerable attention in the literature on local economic development. The first relates to common services, the second to business associations, and the third to industrial policy frameworks.

##### ***Common specialist services***

For local producers to gain access to global markets, they generally require specialist producer services to enable them to acquire knowledge about these markets (demand characteristics such as tastes and consumer peculiarities, marketing channels and trading practices). They also need these services in order to prepare their own manufacturing operations financially, technologically and organisationally for internationally competitive production. In particular management and workers need to learn new skills and routines and to adopt new attitudes and practices. Large firms may be able to marshal the resources to engage in required market development and associated product development efforts. Small and medium enterprises, however, often have to gain access to external resources and rely on specialist busi-

ness service providers to obtain market and product information, tools and technologies, skills etc.

In the first main section of this essay, we learned that specialist services are one of the (market-based) externalities to arise from agglomeration. However, the NID literature has stressed the crucial role of inter-firm cooperation in generating specialist services on a non-market basis<sup>12</sup>. For example, Brusco, in his study of Italian industrial districts, emphasised the role of 'real' services. In order to deal with changing market conditions, firms 'must make qualitative changes and they have to organise to get to know the market better, learn to use new technologies creatively (...) Market forces alone are not enough to provide the firms of a district with the essential services they need' (Brusco, 1994:262). In some of the Italian districts, governments played a prominent role in supporting the creation of these services. In the archetypal industrial district of Emilia Romagna, the regional development agency set up a network of general, sector-specific and function-specific centres to provide services to the garment and domestic electrical appliances sectors. These centres were managed jointly with local business associations (Cooke and Morgan, 1994, 1998). In his studies of European and Brazilian industrial districts Schmitz also identified the importance of joint action for common services. He emphasised the 'public or rather club good' and non-market character of these services.

Reviewing the literature one may find a wide range of institutional modalities: i) Public provision, where public agencies provide services such as export marketing, vocational training and technological research centres; ii) public-private partnerships where government, for example (co-)finances service centres but leaves it to the private sector to run them (trade representation, sector specific innovation centres); iii) intermediary forms of non-profit enterprise promotion agencies (non-membership) delivering enterprise development services (Carvajal Foundation in Colombia, and the much quoted Steinbeis Foundation, Germany); iv) business associations (as in the

case of the footwear cluster in Brazil); v) consortia, (more or less formalised agreements between a limited number of firms to pool efforts or resources for a common purpose). Usually these are not sector wide but composed of self-selected groups of firms. Many examples may be found in the area of export marketing, credit and procurement and sourcing of inputs (e.g. Best, 1990); vi) formation of groups of firms is an even more restricted to a smaller group, and often involves more flexible arrangements, such as joint tendering for export orders, or joint procurement and sourcing of inputs. The 'Grupo Exportadora' in Caldas is a group of garment export firms (Helmsing, 1998b)<sup>13</sup>.

One unresolved issue is which are the most appropriate delivery modalities for particular common services under what local economic conditions. Recently, Schmitz reformulated his concept of collective efficiency in an attempt to cope at least partially with this variation. He made a distinction between horizontal and vertical cooperation and between bilateral and multilateral forms of inter-firm collaboration (Schmitz, 1999). This suggests that size (bilateral versus multilateral) and type of cooperation matter. Collective action theory provides additional clues. Other than size of group, it identifies the object of collective action and the characteristics of the object of collective action, the common service.

### ***Business associations***

The diverse roles of business associations (BAs) in economic development are increasingly recognised<sup>14</sup>. Traditionally, they represent their members in their dealings with government and lobby for more favourable economic policies. They also often negotiate collective wage agreements with trade unions. Their other traditional function is a social one. A BA provides reference groups and role models for individual entrepreneurs and their family members. More recently, the emphasis shifted to two other functions, the provision of real services and what Streeck and Schmitter (1985) called 'private interest governance'. The literature on NIDs as we have seen earlier, provides ample evidence of services, such as information, training, technology

and marketing. Private interest governance refers to regulatory functions performed by BAs, especially establishment of norms and standards products, best practices and codes of conduct. The associations can also resolve conflicts of interest between firms.

The expanding role played by BAs may be due to several factors. Firstly, the transformation of the role of the state in economic development. Neo-liberal thinking, which gained ground in the eighties and early nineties, induced national states to reduce their interventionist economic policies. Market forces were expected to provide better solutions to the problems of economic growth. Since then, there has been a growing realisation that market responses are not automatically forthcoming. This market failure may be due to a variety of reasons (upfront investment costs or risks are too high, demand may be too low, the public and 'club' good character of the necessary provisions, knowledge barriers etc). To avoid the old trap of government failure, new forms of governance are advocated. These have in common that they are demand led, 'at arm's length', and enabling. The latter implies that governments share or delegate implementation to other actors. In this context, business associations are one of the key actors articulating the concerns and demands of producers, pooling resources and providing (semi-)public and 'club' goods (cf. Best, 1990; Humphrey and Schmitz, 1996; Meyer Stamer, 1997; and Maskell et.al., 1998).

Secondly, the globalization of economic activity has considerably increased the complexity of the environment in which firms operate, and small firms especially find it difficult to cope with the demands of intensified international competition. They lack the internal resources and the capability to monitor and respond to technological and market changes, and need access to specialist business services. As we have already seen, BAs provide such services, thus contributing to 'collective efficiency'. They constitute a crucial dimension of the 'institutional thickness' of industrial districts and are considered important components of local social capital (Amin and Thrift, 1994).

Thirdly, in the face of rapid technological change firms need to continuously upgrade their capabilities. Although much technological knowledge is codified and increasingly globally accessible, *use and successful adaptation* to local circumstances requires crucial tacit knowledge (Maskel et. al., 1998, Raco, 1999). Tacit knowledge is essentially localised knowledge instilled in firms' routines and practices (embodied in workers and managers, and firm-level procedures and manuals) and its acquisition generally requires proximity and face-to-face contacts. Partly, firms can achieve this on the basis of their own resources, but smaller and less experienced firms need to draw on external resources in order to learn. BAs help to develop the preconditions necessary for 'collective learning' (Keeble, et.al., 1999). They function as channels through which local producers seek to acquire crucial tacit knowledge for local adaptation, either directly or indirectly via BAs in other countries<sup>15</sup>. Meyer-Stamer (1997) and Barzelay (1994) document cases of local producers in ceramic and marble extraction and in the building materials industry in Brazil and Spain respectively. Through their business associations linking up with business associations in Italy, they obtained 'role models' on how to reorganise their industry and bring their own practices up to world standards. BAs may be conduits through which firms 'learn by interaction' (Morgan, 1997, Raco, 1999).

Observers have noted a growing proliferation of business associations in developing and newly industrialising countries. For example, Moore and Hamalai (1993) found that in Taiwan, which is known for its success based on small firm driven industrialisation, 239 national level BAs were officially recorded (1993:1897). My own research on processes of local economic restructuring has demonstrated that new BAs have been formed in Zimbabwe (Helmsing, 1998a) and that firms in Colombia have become member of various BAs at the same time (Helmsing, 1998b).

Moore and Hamalai consider the liberalisation of economies and the loosening of controls on political expression and organisation as

important factors. They stress the relative ease with which firms can constitute associations (in comparison to workers forming unions) and particularly emphasise the 'collective entrepreneurial drive' on the part of the managers of these associations. These factors are no doubt important but in my view take insufficient account of the roles associations perform in service provision, learning and industrial governance.

While associations can play a positive role, they can also be responsible for a 'lock-in', in the sense that they adhere to existing routines and practices and are unable to change and make use of new opportunities. Success and status achieved in the past (e.g. in the era of import-substitution industrialisation) may cause resistance to change. A more political economic explanation of 'lock-in' would apply were the association controlled by small groups of 'interlocking' firms and/or families who enjoy substantial benefits from their current positions of influence and who resist losing them when the benefits of change are uncertain.

### *Industrial governance*

Michael Best has been a strong advocate of industrial policy in the context of new competition. In his view strategic industrial policy on the part of government which should have a production rather than a distribution focus, seeking to shape markets, stimulating and undertaking complementary investments in business support systems, and encouraging firms to develop strategic alliances. The purpose of such a policy would be to promote 'Schumpeterian' competition. This means in part, shaping markets and affecting the form that competition takes in order to enhance economic performance. This would be based on: i) a strong anti-trust and pro-competition policy; ii) the promotion of inter-firm networks and of a balance between cooperation and competition; iii) primacy of strategy over planning whereby strategies are not designed by planners but in concert with industry leaders; and iv) not 'picking winners' but adopting an open sector orientation. Sector-specific policies are less prone to special interest pol-



itics and less corrosive of the consensus and mutual responsibility required to develop and implement sector strategies (Best, 1990). Perspectives differ as to who should be part of this industrial policy process. Best mentions two key players (government, and business leaders and associations), others like Pyke and Sengenberger advocate a tri-partite basis, i.e. including labour unions.

Bennet and McCoshan (1993) go somewhat further and argue that the key challenge is to develop greater *systems* rationality between all actors. A national consensus of industrial priorities needs to be developed in a continuous encompassing process, which includes not only the key ministry concerned and national business organisations but also the participation of sectors and agencies providing key inputs in the business environment (e.g. economic, physical infrastructure). A key question hereby is how clusters and industrial districts can best be incorporated, via sector or via territory.

Meier-Stamer (1997), discussing industrial change in Brazil, comes very close to Bennett and McCoshan when he argues the notion of 'systemic competitiveness'. 'Sustained industrial competitiveness, rests not only on firm's capabilities (micro) and a stable macro economic framework, but also and in particular on a tissue of supporting, sector-specific and specialised institutions and targeted policies (meso) and on governance structures that facilitate problem solving between state and societal actors (meta)' (ibid: 369). Here, the government acts as coordinator, moderator and communicator in policy networks with firms, their associations, trade unions and intermediary organisations in science and technology and in training. Successful policy networks depend, among other things, on the autonomy of collective actors, who are capable of resolving internal conflicts of interests; have trust and a commitment to fair exchange and an orientation towards substantial outcomes, joint decision-making and information sharing.

#### **4.4 Localised economic governance**

Several trends have contributed to a localisation of economic governance. First of all, the roles of local governments have increased for a number of reasons. This is in itself a complex process and several factors are involved. Secondly, in many countries it has been realised that in order to make national innovation and support systems more responsive, they must be decentralised.

Starting with the second trend, Bennet and McCoshan (1993) argued that local coordination is the key. Even though many support systems are nationally organised for reasons of scale and efficiency and cannot be completely decentralised, implementation takes place at local level. They stated that the participation of local actors and firms leads to a better appreciation of specific needs and problems. Networks must be organised locally and 'are meant to integrate vertical programmes and facilitate the flow of information about opportunities and about resources that need to be mobilised to seize these'. Networks facilitate externalities of economic decision-making to become internalised by better attuning decisions to each other, and by preventing negative and maximising positive externalities. The authors distinguished various types of local economic development networks and examined network dynamics. They observed that the capacity to develop LED networks varies strongly by region, depending on the diversity of their economic structures and the level of economic development.

Cook and Morgan (1998) arrive at a similar conclusion but from a different perspective. Their main contention is that in order to become successful in learning and innovation, firms have to develop associational capacities, at the level of the firm (between managers and workers), at the level of inter-firm cooperation and the commodity chain and at the level of enterprise support systems. The main challenge is to get the interaction right between these three elements. The region can perform strategic enterprise support functions that cannot easily be done centrally. The national level is too high to cope with

complexity and detail, while the regional level allows for an appropriate incorporation of local diversity and specificity. Local governance structures must be forged which facilitate coordination and convergence across these three elements.

With regard to the first trend, several factors have contributed to a more prominent role for local government in local economic development. First of all, there has been a generalised and persistent trend towards decentralisation in the public sector, which has complex and multiple causes (cf Helmsing, 1996). By now, the vast majority of developing countries and transitional economies are engaged in processes of decentralisation and strengthening their local governance structures<sup>16</sup>. Public responsibilities have been transferred to local governments, but usually without adequate transfer of resources. The need to generate more local revenues has forced the local governments to take more interest in the economic development of their areas of jurisdiction. It is worth adding that the concern for local economic development does not only derive from the need to raise revenue but is also a response to the preferences of local people and enterprises<sup>17</sup>. Secondly, in a number of countries new legislation has facilitated local governments to enter in public-private partnerships (e.g. South Africa, Uganda, Bolivia). Thirdly, changing perceptions on social security and poverty alleviation have made local government more active in pursuing local employment creation (Bennett, 1990). Fourthly, in a number of countries, national or state governments have launched support programmes to enable local governments to become more active in local economic development. Finally, in a number of countries, there have been genuine regionalist pressures which may stem from political demands in response to past neglect, but which may also arise from the build up of local initiatives in association with processes of local specialisation (Cooke and Morgan, 1997). The industrial district literature has documented and given some credibility to local and regional government involvement, especially in relation to economic regulation, infrastructure, social services and housing and support services (Brusco and Righi, 1989).

Much in contrast to past practices at national level, local governments generally realise that they are but one of many players involved in local economic development. Most local authorities, also in relatively affluent countries, spend a relatively minor fraction of their budgets on direct economic development support. More important, however, is the manner in which they discharge their main functions and realise their economic significance as a) a source of economic opportunity and b) a service enhancing or inhibiting enterprise development and competitiveness (Bennett and McCoshan, 1993). Many studies of NIDs also stress the limited role of local governments. Their initiatives have rarely played a decisive role in the economic development of the clusters (Schmitz, 1992 and 1995, Meyer-Stamer, 1998 and Visser, 1996). Cooke and Morgan define this role as follows: 'The [local] state is to create the conditions whereby firms, intermediary organisations and public agencies can engage in a self-organised process of interactive learning', and, '...the efficacy of [state] intervention depends not only on its resources but also on the capacity of its interlocutors to engage in interactive learning among themselves and on its associational capacity with principal economic actors and their organisations. Its own decisions must become embedded in social processes of learning and policy formulation' (Cooke and Morgan, 1998: 23). It requires awareness on the part of all actors of the need for and the development of learning capacity.

Local actors are best placed to assess their own situation and learn by comparing with other experiences. Learning at the regional level involves institutional and organisational processes. This is what Lawson (1999) conceptualised as a new local or regional competence. It requires an ability to spot signs of change; to create awareness and communicate it to other actors so that all understand the implications; and lastly, it requires a responsiveness to mobilise resources to address emerging problems. Essentially this is a case of collective learning, but now at local governance level.

As we saw earlier, a regional innovation system (RIS) is a support system in which universities, research organisations, vocational training agencies, technological transfer institutions and financial institutions interact with local industries. This creates greater systemic rationality, and is capable of generating substantial efficiencies in the enterprise support system, by reducing policy mismatches and by creating greater convergence in complementary investment and support programmes. Regional innovation systems do not necessarily imply more resources but seek to use existing resources in a more coherent fashion. Small and medium-scale firms are the principal beneficiaries of such support systems.

The RIS, if properly structured, can contribute to collective learning at the level of local and regional policy coordination. It can assist in a social and economic intelligence function by contributing to three feedback loops (Cooke and Morgan, 1998): a) assessing the extent to which the economic trajectory of a region is appropriate; b) comparing the regions' performance with other and 'peer' systems; and c) working out the implications for changes in the system in order to prevent a lock-in (for example, changes in the orientation of and priorities for the enterprise support, training and human resource development). This building of a regional learning competence contributes to the anticipation of challenges at an early stage and as such may contribute to the minimisation of local resource allocation conflicts.

### ***Lock-in***

As an area continues to specialise and organises its social institutions and support systems to enhance this, it may become prone to a 'lock-in' as it becomes progressively unable to change trajectory. Globalisation of trade and the growing mobility of production, enabling substantial and swift relocation processes makes restructuring a more frequent problem of new local economic development. A too strong interdependence between local firms and local territorial institutions may in that context have disastrous consequences for adaptability. Since there are few case studies on such situations, there

is little to go by. Grabher (1993) studied lock-in in the case of the Ruhr region of Germany. This iron and steel and coal mining region was once the industrial heartland. He identified three processes: i) functional lock-in, where firms have invested so much in developing relationships with their current customers and suppliers that they resist switching (high-asset specificity) even though these relations have ceased to be profitable; ii) cognitive lock-in, where common views and perceptions have developed that have become heavily ingrained and inward oriented. Firms cease to look beyond their current business and markets. iii) political 'lock-in', where the system is kept on course thanks to intensive and consensual political decision making in support of the current firms and their trajectories. For example, new firms, unrelated to the existing coal and steel industries, were kept out so as 'not to distort the local labour market'. Training and support systems stayed focussed on these activities, at the expense of developing new ones. It worked but brought the system to a dead-end (Grabher, 1993). This is a general illustration of the point that industrial and territorial governance structures may be a source of additional higher level competence, enhancing the local capability of firms and support systems, but they also may become a contributing factor towards lock-in and recession.

## **5. Final observations**

The creation of local externalities has become an area of policy. Firms in localities and regions which have generated positive externalities and reduced negative externalities have an advantage over others located elsewhere. External economies continue to figure but the source and weight has shifted. At first, the emphasis was on market-based external economies, initially those associated with production, and later those originating in the transaction sphere. However, more recently, non-traded interdependencies have gained more in significance. These include: a) common services organised by joint action;

b) norms and standards, and codes of conduct arranged through private interest governance; c) the importance of trust and social embeddedness of networks. In all, grounded institutions that complement and organise markets constitute a (non-tradable) territorially specific asset: a localised capability (Maskell et.al., 1998).

Evolutionary perspectives and the premises of the 'knowledge-based' economy have introduced a new local dimension. The learning perspective on regional policy aims at change and restructuring, and seeks to augment the ability of firms, industries, clusters and regions to accumulate and utilise knowledge (Raco, 1999). It enhances a multitude of competences in both private and public institutions and promotes the integration of such knowledge. Collective learning is a new resource for firms. Spatial proximity plays a role, alongside organisational and cultural proximity. It takes place through inter-firm cooperation, through the labour market and mobility of workers, and through spin-offs into new firms. Collective learning is characterised by externalities, spillovers and non-market exchanges of information and skills.

Collective learning also refers to the interaction between firms and territorial institutions that regulate and/or are responsible for support systems like training centres, universities, information and technology institutes, and other specialist services. Networking, greater systems rationality and convergence in their investment and delivery programmes may constitute another source of local advantage. It is important to stress here that this does not refer only to local institutions but also to decentralised sector, industry and national agencies. The participation of key stakeholders may generate new forms of local economic governance. These may consist of public or private ones, as well as partnerships. In many countries there has been a veritable explosion of differently constituted local economic development agencies, fora, platforms, commissions etc, that play a role in coordination, promotion and support. Specialisation and localised learning may thus lead to the development of new tailor-made insti-

tutions, which in their turn enhance local capabilities. The broadening of the local institutional base is one of the central messages on local economic development (Amin, 1999).

These features come close to what Maillat (1998) argued in relation to the innovative milieu. He stressed the importance of involving local players and the development of localised synergies leading to new endowments or (non-physical) territorial resources. Synergies may compensate for the lack of local economies of scale, cut transaction costs and develop specific and collective territorial resources (in the form of know-how, specific technologies, products and processes).

The initial focus may be on particular concentrations of products and industries (clusters), but what matters in the end are 'deeper' local regional competences. These include new firm formation (start-ups) and upgrading, the associative capacity of firms, labour mobility and the development of local human resources, synergy between economic activities, the 'thickness' of local institutions and of support systems, and the convergence in their programmes. There is path dependence. The ability to acquire new competences often involves 'unlearning' old competences.

The concern for local externalities, collective learning and local governance should not divert attention away from the wider context in which local firms and institutions are situated. Local economic development implies linking up with new trends and opportunities. Learning thus requires exposure to new knowledge. The role of national and regional innovation systems, consisting of public agencies, business associations and intermediary organisations, is to diffuse this knowledge to local firms, clusters and related institutions and to enable them to make sense of global changes.

The local context for local economic development policy in the South is quite different from the one prevailing in the North. Earlier we noted the large differentiation of clusters. We have also looked at col-



lective learning in the South. Firms are locked into 'old' routines associated with import substitution and operate in an environment which is economically, socially and politically not particularly conducive to collective learning or to the adoption of institutional innovations associated with NIDs and innovative milieus. Few regions and clusters will meet the necessary preconditions for externalities to emerge. In many countries economic development will become even more uneven in geographical terms.

Is there in such a context a case for an interregional policy? The goal of spatial redistribution would seem more remote than ever. Externalities and collective learning imply spatial concentration. Specialisation and its associated institutional endowments enhance this even more. Previous generations of regional policy were premised on the idea that private investment could compensate for regional disadvantage. This paper has given additional theoretical arguments that this would be unrealistic. It would be even more difficult to catch up and to break circular and cumulative causation. The case for an interregional policy would rest on two arguments. Firstly, a region may become overspecialised and subject to an economic crisis when its economic base is undermined by changes in demand. As also argued by Krugman, intergovernmental transfers may help the region to restructure and find a new economic base. The aim of such a policy would be to enable the region concerned to develop new skills and renew firm-level and area-level competences for a new economic base. This would amount to area-specific policies rather than blanket or general policies (cf Maskell et.al., 1998). A second argument in favour of interregional policy is social. Many regions are and will continue to be excluded from economic development. There are various kinds of arguments in favour of social policy: political as well as those derived from principles of social justice.

To summarise the discussion, it would be fair to say that we are moving towards a new generation of local and regional policies. This new generation of policies is, on the one hand, a response to the further

study and evaluation of endogenous regional development and policies through NIDs and based on new perspectives of collective learning. On the other hand, they result from the recognition that globalisation makes territorial production systems and not just companies compete with each other. This means that new policies cannot be exclusively local but must take into account the position and the positioning of territorial production systems within a local-global context. Furthermore, recent experiences have indicated that policies cannot be exclusively local or regional, to the point of excluding sectoral and (inter)national policies and contexts. Horizontal coordination among a range of actors needs to be complemented by vertical coordination between levels. The new generation of policies is premised on the recognition that new policies need not necessarily require more resources but seek to enhance governance and 'systemic rationality' in the use of existing resources and programmes. New policies supersede the opposition between exogenous and endogenous development policies.

New generation policies emphasise systemic competitiveness and governance. While older generations of policies focused on the actions by firms and inter-firm cooperation from within, new policies add to that the importance of the local institutions. Territorial production systems need not be restricted to clusters of small firms, as in many of the 'early' industrial district studies. Asymmetric network configurations of large and small firms can be effective and efficient and may be a faster route for small firms to acquire innovation and competitiveness. In contrast to older generations of policy, new policies stress the importance of networking among support institutions to achieve greater systemic rationality in the *overall* effort. Industrial governance systems have to become multi-level in order to achieve this. The key to the success of particular industrial localities and regions is how well they manage their respective external nexus and are able to mobilise (inter)national and sector support.

Finally, and with regard to my opening remarks on function and territory, we may conclude that the literature on local and regional development over the past 15 years has re-affirmed the territorial embedding of economic development. It is not a question of either function or territory, as Friedmann posed it. The central question is the degree to which functional organisations draw on various forms of territorial organisation, and benefit from a range of agglomeration advantages. For small organisations, like SMEs, territorial organisation constitutes an additional resource potential. In that context, the fundamental question still remains that some territories have greater local capabilities than others.

## Endnotes

- 1 With this model Krugman shows that an open competitive labour market is more efficient than a captive labour force in a company town (Krugman, 1991).
- 2 In the mid-seventies Jos Hilhorst conceptualised the advantages of having a head start, which he contrasted with Hirschmann's advantage of a late comer, at the occasion of the opening lecture of the conference organised by the ISS in 1976 on UNCTAD IV.
- 3 In the late eighties and early nineties flexible specialisation had two major branches. The North American literature had an emphasis on regional production systems and has stronger roots in the regional science tradition of aggregate sector and linkage analysis. The Northern European and development studies branch, has a greater focus on clusters and on industrial organisation.
- 4 NIDs are characterised as geographical and sectoral concentrations of firms. They have a predominance of SMEs. The features of their industrial organisation are vertical disintegration at the firm level and related subcontracting, cooperation and competition. Last but not least, they have a common heritage and socio-cultural institutions and an active self-help organisation.
- 5 This is not restricted to developing countries. Malmberg (1996) reviewed evidence on the importance of local production linkages in clusters in OECD countries and found their significance in clustering to be far from clear.
- 6 These contrasts have been subject of two interesting contributions, of Martin and Sunley (1996) and Boddy, (1999). Krugman seems to communicate primarily with fellow mono-disciplinary economists and on occasion speaks in a rather patronising manner about the work of (new) economic geographers (Martin and Sunley, 1996). His coverage of the economic geography and location the-

ory literature is highly selective and refers primarily to (neo)-classical location theory. His focus is on modelling the interaction between trade and location, including only those variables than can be modelled with existing and new modelling techniques. These models are based on deductive reasoning from key assumptions, mostly from highly simplified accounts of the real world. The NID literature and economic geographers in general have abandoned such restrictive deductive formal modelling and work in a more discursive manner, involving key overall concepts.

- 7 Krugman argues that there are three policy considerations. The first is never to specialise completely. Second, have built in stabilisers via intergovernmental transfers and, lastly, emphasise the capacity to adjust, through retraining, retooling, and generation of new industries. Migration of labour is another adjustment response. In a later section we will return to the policy implications.
- 8 Martin and Sunley are correct when they conclude that Krugman appears to be much closer to Michael Porter than his criticisms of competitive advantage seem to suggest.
- 9 Camagni defined the milieu as 'a set of territorial relationships encompassing in a coherent way a production system, different economic and social actors, a specific culture and a representation system and generating a dynamic collective learning process'.
- 10 Asheim does not give this third dimension much attention, and he is rather critical of the innovative milieu concept, which he considers too static and too much oriented to local territorial relations.
- 11 This complexity also helps to explain why different local actors often hold different views as to what constitute their own specific local advantages. Few would have a grounded understanding of all relevant aspects and their inner workings, most have partial

knowledge only. The more tacit elements, the more difficult it is to imitate (Maskell et al. 1998).

- 12 In contrast to the NID literature, Best emphasised sector-specific common services, so-called 'sector institutions': 'A sector can include a variety of inter-firm practices and extra-firm agencies such as trade associations, apprenticeship programmes, labour education facilities, joint-marketing arrangements and regulatory commissions, each of which facilitates inter-firm cooperation' (ibid:17). In other words, 'firms not only compete, but they can also cooperate to provide common [business] services, to shape "the rules of the game" and to shape complementary investment strategies' (ibid).
- 13 In addition to these non-market forms, there are of course also market-based service providers: domestic private suppliers and buyers in the commodity chain and private consultant firms, e.g. in marketing, technology transfer, training and HRD, etc. Equipment suppliers are often alleged to be an important source of innovation and learning. Last but not least, and especially in the context of global commodity chains, global buyers and export trade intermediaries constitute a special category (Schmitz and Knorringa, 1999).
- 14 Business associations can take a variety of forms (Levitzky, 1993, 1994). They may be fully privately constituted and based on voluntary membership. At the other extreme, they may be semi-public with compulsory membership. BAs may be general or multi-sectoral, sectoral or functional (that is, related to a particular function or activity, like export marketing). Alternatively, they may be territorially constituted (like chambers of commerce or city or regional business associations). Some BAs are indeed small while others are very large measured in terms of members or in terms of budgets. Small firms sometimes organise themselves in separate organisations. This may be by design, when their members seek

greater autonomy and voice, or by default when larger firms keep them out (formally, through entry requirements, or informally). In other instances, small firms are and prefer to be part of wider associations as these wield more influence and or provide more specialised services.

- 15 Public organisations can serve as a conduit for codified knowledge but have inherent disadvantages in providing the tacit knowledge relevant to firms.
- 16 Of the 75 developing countries with more than 5 million people, 63 are pursuing decentralisation policies that devolve functions and responsibilities to local governments (Lee and Roberts, 1999).
- 17 Lee and Roberts (1999) report the case of the World Bank financed municipal development fund pilot project in The Philippines in which almost all local authorities had presented and implemented investment proposals to improve public markets. I found similar indications in the case of Bolivia.

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