1. Introduction

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1.1 ENTREPRENEURSHIP AND DEVELOPMENT: LOCAL PROCESSES AND GLOBAL PATTERNS

Few other issues attract so much international interest and debate as globalisation. A search of the Internet using Google generates about 20,700,000 hits for the concept of globalization. With such a widespread use of the concept both in academic and political circles, it is natural that the meanings attributed to the concept vary a lot. Clark (2000) sees it as the process of creating networks of connections among actors at multi-continental distances, mediated through a variety of flows including people, information, ideas, capital, and goods. Norris (2000) describes globalisation as a process that erodes national boundaries, integrates national economies, cultures, technologies, and governance, while it produces complex relations of mutual interdependence. Others view globalisation as a process fuelled by, and resulting in, increased cross-border flows of goods, services, money, people, information, and culture (Held et al., 1999).

Observing that the above descriptions stress producing friction and rigidity in cross-border flows, we suggest that globalisation should be understood as the increasing international interdependence, integration, and interaction among people, companies, regions, and countries. Thus, political, economic, financial, environmental, social, and cultural processes that are global in scope are exerting a growing influence at the local, regional, national, and supra-national level. From an economic perspective, globalisation can be understood as the growing economic interdependence of regions and countries worldwide through an increasing volume and variety of interregional and international trade in goods and services and of capital flows and a more rapid and widespread diffusion of knowledge and technology.
The general motivation for this book *Entrepreneurship and Regional Development: Local Processes and Global Patterns* can be found in the current interest in globalisation as a phenomenon that strongly affects the conditions of local economic development. By bringing together the contributions of a number of leading scientists in the field, our purpose is to contribute to a better understanding of some of the current development aspects, in particular those that foster the evolution of entrepreneurs in local-global processes. In particular, we want to stress that those global patterns of change that are observed and reported in the media and by social scientists are the result of innumerable local processes driven by economic, political, and social entrepreneurs in localities, regions, and nations all around the globe. With this introductory chapter, we provide the readers of this book with a general introduction to the themes brought up in the different chapters of the book.

### 1.2 FOUR ERAS OF GLOBALISATION

Judging from the debate on globalisation in recent years one might get the impression that globalisation is a new phenomenon, and in particular a phenomenon which more or less developed in parallel with the information and communication technology revolution in recent decades. However, the contributions in this book argue that the developments in recent decades which have been described as different aspects of globalisation are not new at all. Instead, we claim that the economic history of the last 1000 years gives several examples of similar rapid and fundamental changes in global outreach, with associated adjustments of the economic and institutional superstructure. Actually, economic historians and structural economists have isolated three earlier large structural changes (see, e.g. Pirenne, 1936 & 1956), that Andersson (1986) denotes as logistical revolutions. However, here we call them eras of globalisation. Each such era has its own process of network formation, where nodes expand and new links emerge.

**The First Era of Globalisation**

The first era of globalisation started in the twelfth century and was based upon improvements in land and, in particular, sea transportation on the one hand and upon the creation of a basic infrastructure for commercial communication and financial transactions on the other hand. This development was fostered by new transaction and transport technologies, with new instruments for payment and new sea routes, larger ships and new
ports. In Europe this period was characterised by the foundation of new cities and the emergence of a city system for trade and knowledge diffusion.

During this era, the world witnessed the development of a new Southern European economic system with the city-states in Northern Italy as its backbone and the new economic system of the Hanseatic League that integrated the coasts of Northern Europe. In the Mediterranean basin as well as in Northern Europe an emerging city system formed a basis for increased trade. The evolution of this system is documented in Braudel (1982) and characterised as an enrichment of commercial networks. One decisive feature of this first era of globalisation was the integration of the two economic systems that were initiated at trade fairs held in Champagne and later pursued in Bruges and London. As a result, Western Europe became partly integrated economically for the first time and for the first time large economic centres grew up in Venice, Florence, Bruges, and Lübeck. However, the reach of this trading system went far beyond Europe because valuable products, such as spices, silk, pearls, and precious stones were imported all the way from Asia (Spufford, 2002). Not only did trade develop rapidly during this period but international financial transactions also developed in a parallel and partly integrated process (Kindleberger, 1984; Braudel, 1994).

Much of the network formation activity at this time was actually the beginning of the development of European market integration. However, it also contained the gradual growth of an Asia-Europe global trade axis.

The Second Era of Globalisation

The second era of globalisation started in the sixteenth century, partly as a consequence of important developments in sea transportation. It may also be seen as an attack on the previous hegemony of Mediterranean merchants, initiated by Lisbon in particular. The development of new types of merchant ships—first the Caravel of Portuguese origin and later the Flute—that could cross the oceans was particularly significant in the evolution of Oceanwide trade. It was also due to the development of an efficient banking and credit system that, for example, could finance long distance trade over the oceans with other continents. Initially, Antwerp, and somewhat later Amsterdam, were the central nodes in the new economic system that reached its peak during the seventeenth century, but all the large capital cities in Europe were engaged in international trade (Braudel, 1994). However, as time passed by, London became the centre of gravity and rose to become the commercial and financial centre of the world.

Another aspect of this new era of widening trade is that major cities remain basic vehicles for the development, while now they serve as integral
parts of emerging nation states. The new ports were the international interface of new states that were soon internally integrated. The nation state observation also relates to the fact that between 1500-1700 these new states initiated a period of colonisation, another form of globalisation that went beyond just improved and denser networks for trade.

**The Third Era of Globalisation**

The third era of globalisation is known as the industrial revolution and it started near the end of the 1800s in England. Its start and successful development is related to the creation of a number of technical innovations that enabled its development in England due to the dominant position that England had reached within the credit and insurance system, maritime commerce, canal building and, later, railway construction and shipbuilding. These new and relatively large-scale and geographically sparse transportation and communication systems made it possible to establish vertical integration links between the raw materials in Northern America and the large-scale manufacturing industries in the port cities of Western Europe. A novel element in this phase of development was supply chains for mass production, both textile and clothing and other standardised products for household demand.

The principle of vertical integration was used in one country after the other around the North Atlantic region. New large industrial cities grew up. Detroit, Chicago, Glasgow, Liverpool, Newcastle, Liverpool, Manchester, and New York are all examples of cities of the industrial revolution. It was also during the later phase of this era that the internationalisation of the production of companies was initiated and multinational companies were born. London was the main international financial centre with Paris and later New York as its main competitors. Capital was raised internationally for large-scale projects, such as railroad investments, and an international market for public debt bonds was created. In parallel an international network of commercial banks was created for the financing of international trade. Most countries in Western Europe and North America became centres of wealth during this era but the variation between countries was substantial (O'Rourke & Williamson, 2006).

A peak period of the third era of globalisation has been identified as the 40 years preceding World War I. In this peak period an international monetary systems based on the gold standard, spread to cover a large set of countries. Facilitated by such a multilateral payment system international trade expanded rapidly, and was accompanied by the establishment of many new multinational companies. All this was possible because of novel
channels for capital flows. It took a large world war (World War II) to break this path of globalisation (Kenwood and Lougheed (1971).

The Fourth Era of Globalisation

The fourth and current era of globalisation started in the middle of the second half of the twentieth century and manifested itself almost simultaneously in a number of knowledge-intensive, often high-tech, urban regions and corridors. It is based on a rapid expansion of motorway networks and air connections and on an increased capacity and speed of information processing and transmission. It is characterised by rapid knowledge-intensification, i.e. knowledge-deepening, that is manifested through greatly increased R&D investments and a rapid increase in the share of knowledge-handlers in the labour force in Western countries and increasingly so also in newly industrialised countries, not the least in Asia. A major driving force behind this development is the growing role played by multinational enterprises, which have a special capacity for building new networks and choosing both production and R&D sites across the world.

The “pole-star” for the development within the different industries is an ambition to accept and increase the use of just-in-time systems, flexible manufacturing systems and economies of scope within a framework of increasingly fine-tuned network relations between the different production units and a parallel intention to get away from the hierarchical, vertically integrated production systems that were a signature of the period following the industrial revolution. During this era, it has become increasingly common for labour-intensive activities to be outsourced – offshored – to other countries – a trend facilitated by the reduction of transport costs and the deregulation of international trade. This relocation of activities has been orchestrated by more than 70 000 multinational companies, with more than ten times as many foreign affiliates according to UNCTAD calculations (McCann, 2008).

This process of subdivision or decomposition has led to the development of globally integrated production systems where the value chain has been divided into various stages performed at different locations (Fujita & Thisse, 2006). In such a system, the plants or firms in different countries can specialise in the production of certain components or subsystems which at or along different stages of a supply chain end up in the assembly of final products. In each stage of such a series of stages economies of scale may be exploited. These changes in the structure of international production and trade have made large multinational companies the major players in the world economy. In the era of the multinational companies, increased inter-
national trade and foreign direct investments go hand in hand with the development of integrated international production systems.

A key factor in this development has been the liberalisation of international trade, international capital flows, and foreign direct investments in recent decades. In a parallel process, the international financial sector has developed substantially with a rapid introduction of institutional savings and the emergence of large markets for financial derivatives to hedge the risks associated with different markets and different financial assets and derivatives. Actually, during this era of globalisation international integration has grown much faster in the financial sector than in international trade and production. In this evolution the friction of interaction over long distances is reduced, but the increased system complexity and lack of friction created instability in the system.

Another feature of the contemporary era of globalisation is an offshoring of R&D activities conducted by multinational enterprises. This is a more recent phenomenon but is quite evident during the past 20 years. Multinationals have R&D activities distributed over many R&D sites and in several different countries. Such an evolution is happening despite the observation that companies theoretically have strong reasons not to globalise their knowledge creation efforts. In particular, this development challenges the idea that R&D is a proximity-dependent process (Andersson et al., 2008).

1.3 WHAT ARE THE DRIVING FORCES OF GLOBALISATION?

Before we go deeper into the current era of globalisation, it is important to try to get a better understanding of the driving forces of the successive waves of globalisation during the last millennium. It is our impression that most economic observers have had notorious difficulties in anticipating and understanding the radical changes of the economic structure that characterises each era of globalisation. One important reason today as well as in recent decades is that so much of the debate about socio-economic development deals with short-run problems, such as inflation, unemployment and the balance-of-payments. In a short-run perspective, these factors have great importance, of course, but in the long run, they are not decisive for the development of society. If we instead want to understand the long-run economic, social, and cultural developments of regions and nations, we must look to those factors that change more slowly, and, thus, affect how new structures with lasting consequences develop.
Economic structural change must be understood as a result of slow changes in the fundamental conditions of regions and nations. These basic conditions can be described as the infrastructure of the economy. In our view of the world, it is the infrastructural capacity, including accessibility to the surrounding world, that determines the long-run development of regions as well as nations. Usually, various forms of infrastructure are regarded as artifacts. However, this is an inadequate definition. Infrastructure should rather be defined as all those material (tangible) and non-material (intangible) factors that are both

- of great collective importance, and
- very durable and difficult to change, in comparison to other types of capital.

This point of view implies that the durability and collective nature of infrastructure creates an arena or an “opportunity landscape” that at the same time facilitates and circumscribes the actions and interactions of households, firms, and political decision-makers. In material and non-material infrastructure, we include

- Durable – almost constitutional – rules for economic and political decision-making, such as ownership rights, rules for setting up a business and for competition in the market, social protection systems and other rights and obligations.
- Networks for the transportation of goods, energy, information, human beings, and, thus, transmission of services and knowledge.
- The level, quality, and distribution of scientific, technological, entrepreneurial, and cultural knowledge, which may be both sticky in space and available in networks.
- Basic values and attitudes to development, creativity, and entrepreneurship.

In and across all of these respects, first Europe and later the rest of the developed world have been subject to a slow but steady change during the last 1000 years. Such a slow change of the infrastructural arena will sooner or later create tensions between fast economic processes of economic change on the one hand, and the slow adjustments of tangible and intangible infrastructure on the other. Moreover, incongruencies in the development of different parts of infrastructure and in the use of infrastructure make the way for catastrophic shifts or bifurcations that may stimulate rapid shifts in system behaviour and institutional settings, implying that one era of globalisation replaces another. As seen from the exposition above, it is
obvious that such complete structural changes have occurred extraordinarily infrequently during the development of the world economy. This also implies that globalisation can not be understood as a smooth continuous process. Instead it is discontinuous with leaps and dramatic changes in specialisation and comparative advantages generating cumulative processes of growth and decline (cf. Mees, 1975).

Analysing in more detail each era of globalisation it seems as if they all have been fueled by successive technological revolutions, in particular in advances that have cut the costs of transportation of goods, people, and information. New means and systems of transportation and communication have reduced transportation and communication costs and time, which have in turn brought different parts of the world closer to each other. The advances in transportation and communication technologies have in each era been part of a wider range of technological and commercial innovations, which together with increased international trade have resulted in rapid productivity growth and a general increase in welfare. A critical factor in this type of transformation is the development of techniques for controlling interaction and decision making in networks.

1.4 LOCAL PROCESSES IN THE CURRENT ERA OF GLOBALISATION

Perhaps the most exceptional aspect of the current era of globalisation is that entrepreneurship has become the engine for local processes of economic, social, and cultural development throughout the world. Small and medium-sized enterprises and entrepreneurship clearly began increasing their relative importance during the mid-1970s (Acs & Audretsch, 1990, 1993; Loveman & Sengenberger, 1991; Audretsch, et al., 2002). Scholars naturally have begun to look for theoretical explanations to this turn-around. Brock & Evans (1989) suggested the following six hypotheses:

- Technological change has reduced the extent of scale economies in manufacturing, which may specifically reflect movements away from vertical integration towards more decomposition of activities into spatially dispersed production.
- Increased globalisation has rendered markets more volatile as a result of competition from a greater number of foreign rivals.
- The changing composition of the labour force, towards a greater participation of females, immigrants and young and old workers may
be more conducive to smaller rather than larger enterprises, due to the greater premium placed on work flexibility.

- A proliferation of consumer tastes away from standard mass-produced goods towards stylised and personalised products facilitates the emergence of small niche producers.
- Deregulation and privatisation facilitate the entry of new small firms into markets that were previously protected and inaccessible.
- The increased importance of innovation in high-wage countries has reduced the relative importance of large-scale production and instead stimulated the growth of entrepreneurial activities.

Audretsch & Thurik (2001) have launched another additional explanation for the new wave of entrepreneurship based upon the effects of increased globalisation, which shifts the comparative advantages in the rich countries towards knowledge-based economic activities. Their point is that the role of SMEs changed as the comparative advantages shifted. There are two reasons for this according to the authors: (i) large enterprises in traditional manufacturing industries have lost their competitiveness when producing in high-cost countries, and (ii) small entrepreneurial enterprises find new product areas and new customers in knowledge-based economies.

The observation of new areas of entrepreneurship and an associated growth in the number of small firms may seem paradoxical, since it puts our earlier observation of a growing importance of multinational firms into contrast. From one perspective, we may point at improved possibilities also for small firms to be “non-local” by making use of advances in network formation and communication. Extending this argument, small firms can interact with large (multi-location) firms and have such firms as their customers. From another perspective, we may argue that in contemporary rich countries the share of services in the economy is growing. This provides opportunities for small innovative entrepreneurs to offer a local variety of distance-sensitive supply of varieties to other firms in an economy where urban proximity is a major characteristic. Part of this supply includes deliveries of specialised knowledge.

In view of the above observations, we must persist in asking: why do small entrepreneurial enterprises find a new role in the knowledge-based, globalised economy? In line with ideas originally developed by Schumpeter (1934), some economists in recent decades have claimed that innovations offer opportunities for entrepreneurs to launch new innovative firms in the market place in a knowledge-based economy. Actually, innovative entry is now widely regarded as a central force driving competition in different markets (Dosi et al., 1997). However, genuinely new firms by definition have not been able to generate new knowledge of their own (Acs &
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Audretsch, 1988). This implies that the emergence of new innovative firms is highly dependent upon spillovers of old as well as new technological and entrepreneurial knowledge from other economic agents. It seems reasonable to assume that as the volume of knowledge production has increased in the rich countries in recent years, the potential for knowledge spillovers has also increased and so has the formation of new, small innovative firms.\textsuperscript{13} Does this allow us to suggest that local networks and proximity externalities are basic characteristics of economic life in the globalising economy?

In association with the above question, we recognise that knowledge-generating activities, such as R\&D, exhibit a strong spatial concentration to, in particular, large urban regions in the rich countries, and that knowledge spillovers are bounded in space (Karlsson & Manduchi, 2001). This implies that there are very substantial differences between functional regions in terms of knowledge accessibility and, thus, in knowledge potential to develop new innovative firms. There are also other important differences between functional regions, that influence the conditions for local entrepreneurial processes. These concern institutional frameworks and demand and supply conditions.

Effective institutions lower transaction costs and thus costs associated with establishing new firms. Such institutions can also provide the right incentives for innovation and entrepreneurship and help to protect property rights. Embedding entrepreneurial firms in such environments may also foster the efficiency and responsiveness of innovation activities. Variations in institutional frameworks between functional regions create variations in opportunities for knowledge spillovers and for appropriating rents from innovations.

Regional variations in demand conditions, in terms of market potential and demand for new products, generate spatial variations in entrepreneurial opportunities. New firms to be launched are dependent upon a high regional demand, because the costs to serve more distant markets normally are often prohibitively high. Thus, the best opportunities for entrepreneurial initiatives are offered by functional regions with a large home market in terms of purchasing power and high access to markets in other regions at home and abroad, i.e. large urban regions. Economic agents with business ideas located in large functional regions may

- take advantage of close proximity to a concentration of (potential) qualified and demanding customers (households, firms and/or public sector organisations), which offer purchasing power but also information about optimal mixes of product characteristics,
- take market shares from incumbents (Hotelling, 1929),\textsuperscript{14}
• reduce their transaction costs (Quigley, 1998), e.g., search costs for finding customers and suppliers and/or the search costs for customers and suppliers to find them,
• take advantage of positive information externalities in such regions including the higher probability to observe established firms that are producing successfully,
• achieve a reduction of the business risk to the extent that fluctuations are imperfectly correlated across customer groups (Mills & Hamilton, 1984),
• take advantage of larger potential knowledge spillovers (Acs et al. 1992),
• take advantage of a large pool of well-educated and specialised labour (Marshall, 1920), and
• take advantage of a greater variety of non-traded inputs including physical infrastructure provided at lower costs (Krugman, 1991).

Furthermore, the larger and the richer the functional region, the larger the number of potential entrepreneurs, since economic agents in such regions have better education on average, have more varied work experiences, etc. Actually, large and rich functional regions offer increasing returns in the acquisition of entrepreneurial skills due to more effective and numerous interactions in denser areas (Glaeser, 1999; Desmet, 2000).

The implications of the above discussion are far reaching in terms of local entrepreneurial processes in the current era of globalisation. Since larger functional regions offer larger opportunities and higher capacity for entrepreneurial actions, and a higher probability of successful entrepreneurial initiatives, these regions will normally experience a build-up of entrepreneurial knowledge. This will stimulate additional entrepreneurial activities and generate cumulative processes, which can strengthen the entrepreneurial potential of these regions, and thereby attract additional inflow of innovation talents.

Comparative advantages of large, rich functional regions in the development of knowledge-based entrepreneurship do not exclude the possibility of smaller functional regions being able to offer favourable seed-bed conditions for knowledge-based entrepreneurship within, for example, specialised industrial clusters. However, small and medium-sized functional regions also have other options to stay competitive in the new era of globalisation. According to Johansson & Karlsson (2001), such regions may succeed in developing an economic milieu that can foster localisation economies in a minor or limited set of industries. Such a milieu will then be the host of specialised clusters of limited scope or even a single cluster.
These may have characteristics in common with the entrepreneurial environments in large functional regions. In order to succeed, innovations in these regions need to be export-oriented from the beginning due to their limited local market. In other words, exporting to markets outside the home region is the only means by which innovative firms in small and medium-sized functional regions can circumvent the constrained size of the regional market. Obviously, this constraint implies that the local processes of innovation and entrepreneurship in these regions is different, and associated with links to customers in often distant foreign markets. In cases where many actors in a smaller region develop market knowledge in a specialised product area, the consequences of smallness may be turned into an advantage.

1.5 GLOBAL PATTERNS IN THE CURRENT ERA OF GLOBALISATION

Returning to the current era of globalisation, it is essential to stress the growing economic interdependence between localities, regions, and nations that has become manifested by the rise and expansion of multinational enterprises (industrial globalisation) and the emergence of worldwide financial markets (financial globalisation). The evolution of worldwide markets, communications, and resources has in recent decades gone hand-in-hand with (i) the emergence of a knowledge society, (ii) more rapid technological changes, and (iii) increased environmental awareness.

Extensive economic networks in the contemporary era of global interdependence are facilitated by decreasing costs for transportation of goods, people, and information, and deregulation, liberalisation, and lower barriers for international trade and foreign direct investments. The major forces of globalisation comprise the following set of phenomena:

- Rapid physical integration – in particular the steady long-term growth of air travel for persons and freight transport by air and container ships.
- Rapid information integration – in particular the Internet and global TV channels.
- Rapid financial integration (Stultz, 2005), where worldwide financial transaction flows have risen to enormous volumes.
- Increased institutional integration (EU, NAFTA, etc.) and coordination.
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- Increased import penetration (GATT, WTO, etc.), which has stimulates trade to expand much faster than GDP on a world-wide scale.

To a large extent globalisation has been orchestrated by large multinational firms, that have used the emerging new economic arena to, on the one hand, outsource and offshore production to lower production costs, and on the other, locate production close to customers. Overall, the changing international environment in finance, human resources, technology, politics, economics, and social conditions has created new opportunities for entrepreneurial enterprises to expand their international businesses at a pace that is much faster than was possible 40 years ago (Kumar & Liu, 2005). One of the most astonishing developments during the past 25 years is the location patterns of the R&D activities, where multinational enterprises operate with many R&D sites in many parts of the world, and where all firms in many industries build networks for knowledge interaction across country borders (Andersson et al., 2008).

The general effects of globalisation may be summarised as follows. First, the past 15 years display an increased rate of global economic growth (Dreher, 2006), which is strongly stimulated by increased participation in world market exchange by large developing countries like China, India, Russia and Brazil. Second, networks for trade and financial flows generate an increasing degree of economic interdependence (Koehane & Nye, 1977). Third, the speed of adjustments in the world economy increases, stimulated by reduced friction of many forms of information flows – both mass-distributed flows and keyboard-to-keyboard communication. Fourth, inequalities of real income per capita are changing as a consequence of many emerging market economies which in recent decades have experienced an annual GDP growth of 10 percent or more. Fifth, the diffusion of information become more rapid across the entire world, supported by mobile network connections. Sixth, time saving in most types of operations is emphasised, making economic activities faster and forcing actors to apply just-in-time principles. Seventh, the mobility of people across country borders has increased, induced by push factors like conflicts and catastrophes, and improved information to migrants about where to go, and how to do it. Eighth, fast global changes imply growth of risk and uncertainty, which increases the demand for flexibility and fast adaptation. Ninth, new social, cultural, economic, and political tensions evolve.

With the above list of consequences we may ask: what are the economic consequences of the many changes? The organisation of companies and markets may have to change. The structure of the economies is stimulated to change, for example as observed by a rising share of business services in
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OECD countries. More substantially, the pattern of occupations seems to become richer and more diversified, announced as a growing share of individuals belonging to the creative class (Florida, 2002). In association with creativity and knowledge production, the share of individuals with university education has grown steadily in both OECD countries and elsewhere. In particular, location patterns are changing along two dimensions. First, manufacturing production is expanding fast in newly industrialised countries. Second, economic activities in the wealthy countries concentrate in large urban regions, which afford diversity of knowledge services to households and business.

For each of the economic effects of globalisation we may observe a number of trends. In the transformation of the organisation of companies, we can detect the following change patterns (see, e.g. Kobrin, 2002): (i) the traditional hierarchical organisation of companies is abandoned; (ii) middle-management is drastically reduced if not disappearing; (iii) development of widened and more independent work-tasks at lower organisational levels; (iv) larger companies are divided into smaller semi-independent units; (v) large firms carry out substantial out-sourcing of non-core business; and (vi) urban economies experience an increased share of smaller entrepreneurial firms.

The described changes imply a transformation of the organisation of markets as described in Table 1.1, which emphasises network formation for collaboration among competitors and interaction between firms, where one party is supplier and the other a customer.

Table 1.1 Forms of market interaction and formation of interaction links

<table>
<thead>
<tr>
<th>Firms as Customers</th>
<th>Firms as Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Systems-producing manufacturers transfer their production to suppliers of components and services (e.g. automobile producers)</td>
<td>• Strategic alliances and partnership between competitors in R&amp;D projects and business creation</td>
</tr>
<tr>
<td>• Leading retail companies govern their suppliers both with regard to product design and technology (e.g. IKEA, Marks &amp; Spencer)</td>
<td>• Network relations among affiliates of multinational firms, allowing knowledge interaction to remain confidential</td>
</tr>
<tr>
<td>• Increased cooperation between customer firms and their suppliers, where end-product firms transfer product development tasks upstream.</td>
<td>• Network relations are initiated by suppliers of services and knowledge, often described as technology-based entrepreneurial firms (e.g. biotechnology)</td>
</tr>
</tbody>
</table>
For the transformation of the sector structure of the economies in the rich industrialised countries, we notice a two-pronged change, where employment in service production – in the aggregate – is substituted for employment in manufacturing. Hence, the share of an economy’s total labour in manufacturing continues to decrease in a process where production is decomposed into subsystem activities, allowing the core manufacturing activities to be separated from specialised components and the use of diversified service industry inputs – backed by various forms of outsourcing. In addition, the described demand for diversified service inputs also arise in all other sectors outside manufacturing, including service production itself. As a consequence, an increase in the total labour force has its employment concentrated in firms classified as belonging to the service sector and, in particular, business service supply – with a focus in knowledge-intensive business services.

The declining share of employment in manufacturing activities is partly due to the nature of aggregate product cycles, along which firm strategies of labour-cost savings dominate development. To a larger extent before the trimming of production and cost-motivated relocations occur and are associated with the decomposition of a firm’s or a company group’s operations, routine activities of various kinds are separated from business creation, design, and other R&D. The combination of decomposition and relocation is frequently referred to as outsourcing and offshoring (Johansson and Karlsson, 2009).

The growing share of employment in service-sector firms is partly as a consequence of the outsourcing of service activities from manufacturing and other goods-handling firms to new service providers which can adjust better to changing demand and thus increase their scale and scope by large increases in customers. In addition, previous service supply by public producers have in recent decades been “outsourced” to increase suppliers’ adaptation to customer demand and to increase incentives for cost efficiency. This evolution is especially evident for knowledge-intensive producer services.

The emerging new shape of the economy in line with the above picture has given it a variety of different names: the information society, the service society, the post-industrial society, the network society, the knowledge society, the “new” economy, etc. In several ways the change of the economy can be illuminated by focussing on occupations as a complement to a description of how the share of different sectors evolve. Such an overview is given in Table 1.2.
Table 1.2 The occupational structure in high-income economies of the world

<table>
<thead>
<tr>
<th>Development of Occupations</th>
<th>Characterisation of Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The share of goods-handlers decreases steadily</td>
<td>Goods-handlers participate in goods production, displacement activities such as storage, transportation and other logistical operations</td>
</tr>
<tr>
<td>The share of information-handlers is stagnating or decreasing</td>
<td>Information-handlers are occupied with collection, organisation, storage, and transmission of information</td>
</tr>
<tr>
<td>The share of service-handlers increases in a steady way</td>
<td>Service-handlers deliver services proper, where both the customer and the deliverer simultaneously participate in the production, e.g. health care</td>
</tr>
<tr>
<td>The share of knowledge-handlers increases rapidly</td>
<td>The tasks of knowledge-handlers comprise knowledge creation and knowledge transmission in teaching and tutoring situations.</td>
</tr>
<tr>
<td>The knowledge intensity of each occupation increases steadily</td>
<td>Knowledge intensity may be measured by the share of persons with at least three years of university education (or equivalent)</td>
</tr>
</tbody>
</table>

Source: Adapted from Andersson (1988) and Andersson and Johansson (1984).

The transformation of the educational structure in the rich industrialised countries takes the form of a rapid increase in the share of the labour force with

- A long senior high-school education
- A basic university degree
- A PhD degree

As regards the transformation of location patterns it is possible to simultaneously observe a process which combines diversified density and dispersal away from central urban areas. In the terminology of Krugman (1991a), there is an interplay between centripetal and centrifugal forces, where the first is determined by proximity advantages, and the second by demand for space at competitively low land rents. An implication is that decentralised activities tend to cluster in new sub-centres.
Knowledge-intensive and high-technology activities are favoured by proximity externalities in large urban (metropolitan) regions, where knowledge-intensive producer services, R&D, etc. exist. Advanced business services prefer accessibility to customers across all sectors. Other knowledge-handling activities are attracted by mutual accessibility. The associated location dynamics unfolds in both OECD and newly industrialised countries as a consequence of global decisions.

According to the preceding presentation, manufacturing production is relocated to newly industrialised and low-cost countries, referred to as offshoring and FDI decisions. Preconditions for the relocation process are that firms develop activity routines which can be transplanted to new economic environments and that supply chains and interaction can be controlled via long-distance communication systems. Many other information-handling activities which become routinised are gradually outsourced and offshored, or they find location in dispersed sub-centres of urban regions in the OECD area.

Small and medium-sized urban regions offer locations for routine activities in goods-handling and information-handling activities that can gain competitive advantages due to local agglomerative processes that may generate specialised clusters in each specific region. This latter dynamics includes relocation from large urban regions and local start-ups. In this way small and medium-sized urban regions have clear similarities with sub-centres of large urban regions, including so-called edge cities.

The structural transformations and location dynamics described above have gradually become feasible due to technology advancements, where three technical areas have been vital in past decades and may remain so into the future:

- **Structural decomposition** of production operations into several different moments or steps, where each step that can be carried out in a separate plant, and where each plant or establishment can have its own place of location.

- **Systems integration** where different parts or subsystems of the activities of a company are integrated so as to optimise the activity system of the entire organisation. It is a type of systems design that enables outsourced and offshored activities to work together in an integrated fashion. A full-scale integration will include deliveries from input suppliers and distribution of outputs to customers and eventually also to suppliers.

- **Network control and governance** that can guide and coordinate the operation of decomposed activities and make them co-function as an integral system. Network coordination and systems design are based
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on (i) modern computer and telecommunications technology, which facilitates rapid transfer (and compilation) of routine information over long distances, and (ii) improved air and road networks, which make it possible to organise the pertinent flows from a systems perspective, where flows include material deliveries, mediated information and communication, and direct person-to-person contacts based on trip making.

1.6 STRUCTURE AND CONTRIBUTIONS IN THE BOOK

In Chapter 2 David Audretsch observes that globalisation has shifted the comparative advantage of the OECD countries away from physical capital towards knowledge capital. In a parallel process endogenous growth theory has provided an intellectual framework which has shifted the focus of public policies towards measures, which promotes investments in knowledge such as research and development (R&D), patents, human capital, and universities. He suggests that as a result a new public policy approach has emerged as a strategy for taking advantage of the opportunities offered by globalisation with a focus on generating entrepreneurship capital, i.e. the capacity of economies to generate entrepreneurial activities. However, investments in knowledge may not automatically spill over into commercialisation, which is necessary for innovation and growth. As Audretsch suggests there may exist knowledge filters that impede the spillover and commercialisation of knowledge and thus the start-up of the new firms that play a critical role in the spillover process. To reduce the influence of knowledge filters in the OECD countries there is, according to Audretsch, a need to put more emphasis on entrepreneurship policies.

Sierdjan Koster and Charlie Karlsson in Chapter 3 review the existing evidence concerning the relationship between new firm formation and economic development in light of the ongoing globalisation process. Although there is a large research body on new firm formation and national and regional growth, rather little is known about the context of this relationship. In other words, the question whether the characteristics of new firm formation change over time and how this affects its role in economic development is rarely asked. Even if a positive relationship between new firm formation and economies is normally assumed there are indications that this relationship is not necessarily stable over space and time. The destructive nature of new firm formation in certain periods is well-known. There have also been periods such as the first decades after the Second
World War when increasing scale economies in existing firms was much more important for economic development than new firm formation. In subsequent decades the importance of new firm formation was detected not least of all in the US. In the current era of globalisation it is important to have as correct knowledge as possible about the role of new firm formation in economic development.

The US is traditionally viewed as driven by entrepreneurs, whereas the Swedish model is associated with high welfare ambitions and less focus on entrepreneurial activities. In Chapter 4, Benny Borgman and Pontus Braunerhjelm seek to empirically investigate whether the connection between entrepreneurship and growth at the regional level differs between the US and Sweden. By regressing annual entrepreneurship on regional employment growth (and controlling for other conceivable factors affecting employment growth), entrepreneurship is shown to be positively and significantly associated with regional employment growth in both countries in the 1990s. Still, the result is more robust for the US! Other important variables for regional growth are business density, and in the US, educational levels and internal scale economies.

Chapter 5, written by Zoltan J. Acs and Catherine Armington, examines the various business populations in the US, whose growth has been posited as following Gibrat’s law of Proportional Effects, and investigates the extent to which this law apparently holds. The entire population of US businesses with employees is analysed, estimating the relationship of their growth rates to their firm size, establishment age and establishment size. Age is found by far to be the most important predictor of employment increases and decreases, with new establishments typically contributing nearly three times the annual net growth in jobs, while older establishments together lose almost twice the net growth amount. Growth rates of existing firms are found to decrease with firm size for single establishment firms, after controlling for age. However, for establishments in multi-unit firms, growth rates decrease with increases in establishments’ size, but are independent of firm size after controlling for establishment size and age. The inverse growth-age relationship is consistent with Jovanovic’s theory of firm learning, and the independence of firm size for multi-unit firms is consistent with Sutton’s theory of the firm behaving as an aggregate of independent business units in various sub-markets.

In Chapter 6, Gary Cook and Naresh Pandit examine the relationship between clustering, entrepreneurship, and multinational enterprises in promoting firm formation and growth within the media clusters in London. The evidence presented is based upon a large-scale econometric model, a questionnaire survey and an in-depth interview survey. The authors’ key conclusions are: (i) strong clusters promote entrepreneurship, which in turn
entrepreneurship and regional development promote cluster strength in a self-reinforcing dynamic process; (ii) some firms are better able than others to benefit from a cluster location due to superior firm competencies and absorptive capacity; (iii) strong clusters attract multinational enterprises, which create important feedback loops such as spillovers from multinational enterprises to local firms that enhance cluster strength, which attracts further multinational enterprises; and (iv) cluster strength contributes to the ability of entrepreneurial firms to expand overseas via export sales, licensing, and foreign direct investments.

The purpose of Chapter 7, written by Charlotta Mellander and Johanna Palmberg, is to explore the relationship between the localisation of consumer service firms and household migration using data for municipalities in Sweden. They test the extent to which accessible market size at three geographical levels explains the existence of consumer service firms. They also test if variations in the consumer service supply contribute to explain the migration patterns on top of the explanation offered by wage differentials. Estimating two equations individually as well as simultaneously they are able to show that variations in the supply of consumer services contribute to explain the migration patterns in Sweden together with the variations in the wage levels. The size of the accessible local market potential is of great importance in explaining variations in the local supply of consumer services. Interestingly, even though one should expect simultaneous processes to be involved, a simultaneous estimation of the two equations does not contribute to the explanatory power.

In Chapter 8, Johanna Nählinder analyses the innovativeness of young fast-growing knowledge-intensive business service firms (KIBS), so-called gazelles. KIBS, which among other things includes consultancy, R&D, and IT firms, have shown considerable growth over recent decades as well as a high level of innovativeness. They are also expected to have a positive impact on innovation systems in general and for their clients in particular. In the chapter, the author discusses the concept of gazelles, and maps the existence of KIBS firms in general and of KIBS gazelles in general. The geographical aspect is considered and it is shown that 59 percent of all KIBS firms in Sweden are located in or near one of the three metropolitan regions. However, KIBS firms are present in all types of municipalities and so are KIBS gazelles. The analysis indicates a high share of innovative firms among the KIBS gazelles.

Lars Rönning, Elisabeth Ljunggren and Johan Wiklund in Chapter 9 explore cases of community entrepreneurship, where the municipality acts as a community entrepreneur in order to facilitate local economic development. The literature on community entrepreneurship provides a fragmented picture of the community of entrepreneurs in terms of actors, and the objectives and action patterns they follow. Departing from an
entrepreneurship theory framework, the authors develop an explanation for community entrepreneurship based upon the need to compensate for deficient entrepreneurial human and social resources. The findings from exploring three cases of community entrepreneurship undertaken by a rural municipality in Norway indicates that successful accommodation of a new entrepreneurial activity is linked to a focus on creating entrepreneurial human and social capital. The study reported in this chapter also demonstrates how a municipality can take the role as community entrepreneur and develop a proactive business development strategy in the absence of private entrepreneurs who autonomously drive economic development.

In Chapter 10, Andreas P. Cornett analyses the changing regional development strategies and the policy for its implementation in Denmark with regard to development and innovation against the background of the organisation of the regional system in Denmark. The consequences for regional business development policy, in particular in the peripheral and rural parts of Denmark, are assessed. Core elements in the new development strategies, national as well as regional, are the improvement of knowledge dissemination, innovation, and local entrepreneurship. The analysis provides a deeper look into the role of innovation in regional policy, and what types of policy can best stimulate innovative activities in business and industry. New approaches to the implementation of innovative development measures are also presented and discussed. The main results reported in this chapter are evaluated with special attention to the organisational and functional aspects of a knowledge-based regional development policy. One important conclusion is that nontraditional measures are needed in particular if innovation policy is to reach small and medium-sized firms and firms located far from knowledge institutions.

Ho Yeon Kim in Chapter 11 presents a monopolistic-competition model built to explain various features of just-in-time (JIT) manufacturing by assemblers and two classes of suppliers in the context of the automotive industry. Unlike previous studies, demand and prices are endogenously determined. It is shown that as assemblers implement JIT purchasing, first-tier suppliers bear an extra burden and try to defray the cost by charging higher prices for their products or by also shifting to JIT manufacturing, although their ability to do so is limited by the degree of substitution among the goods they offer. On the other hand, second-tier suppliers should be reluctant to comply with a JIT scheme because the conventional practice based on economic order quantity remains more lucrative.

In Chapter 12, Börje Johansson, Hans Lööf and Bernd Ebersberger start from the observation that there has been a dramatic increase in foreign ownership of firms in the four Nordic countries Denmark, Finland, Norway,
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and Sweden. This has generated an interest in the welfare effect of the foreign takeover of national assets. In the chapter the authors ask the following question: what would a firm’s behaviour and performance have been if a foreign owner had not acquired the firm? The analysis in this chapter is based on a sample of 5186 firm-level observations in the four Nordic countries, of which close to 30 percent are owned by foreign companies. Using an empirical approach that accounts for both selection and simultaneity bias, the authors establish some new findings regarding domestic and foreign ownership: (i) no robust difference in the propensity to innovate can be established; (ii) among the group of innovative firms, foreign-owned multinationals are generally outperformed by domestic multinationals in R&D and innovation engagement; (iii) despite the fact that domestic multinationals are considerably more involved in the national innovation system than other firms, they are not producing more innovation per R&D dollar, controlling for firm size, human capital, and industry; and (iv) the foreign takeover of firms is neutral with respect to labour productivity, and hence no evidence of welfare gain or welfare drain can be established.

Per Assmo in Chapter 13 begins from the observation that knowledge and creativity are increasingly important factors in economic growth. Changes in the economic landscape imply that the location of human capacity becomes a key aspect for knowledge creation and regional economic growth. In the chapter the author discusses the influences of political-economic structures and the importance of creative human capital, in relation to the development and localisation of a government-supported regional film industry in Sweden. The overall purpose for initialising and over time subsidising these regional film production centres is to enhance regional economic growth in new creative industrial sectors that can replace and/or supplement the traditional industries. The author argues that this kind of creative industry is most likely to be successful in locations that can provide financial support and attract key creative human capital. Regions with a high population density and a diversified economy are thereby the most suitable regions.

Roberta Capello in Chapter 14 starts from the observation that Europe in the two last decades has faced drastic economic, institutional, and social changes, that puts the future development of its territory under severe stress. Using a methodology that is presented in detail, this chapter provides a scenario for what the European, i.e. the European Union (EU), territory will look like if the present socio-economic and demographic trends continue to the future. The methodology is applied to the 27 EU member countries at the level of NUTS2 regions. The picture emerging in the chapter is that of an EU showing a clear eastward shift of the EU barycentre of growth, with
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a clear advantage for EU member states in Eastern Europe. However, it also shows that the catching-up of these countries remains rather incomplete, since the East-West per-capita differential will persist in the future. The aim of an exercise like this is to raise the awareness of the territorial effects that the present tendencies have in shaping the future of the EU territory. Hopefully, anticipatory and far-looking policy choices can benefit from exercises like this.

NOTES

1. The spelling “globalization” generated about 6 500 000 hits.
2. Actually, Keohane & Nye (2000) distinguishes three dimensions of globalisation: (i) economic globalisation, characterised as long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges; (ii) political globalisation, characterized by a diffusion of government policies; and (iii) social globalisation, expressed as the spread of ideas, information, images, and people.
3. Globalisation has many dimensions. It is also possible to observe political, informational, cultural, etc., globalisation.
4. Ethier (2005, 238) defines (economic) globalisation as “a reduction of barriers – whether technological or legislative – to economic exchanges between nations”.
5. The start of globalisation is a contested issue (Held et al., 1999).
6. Some modern historians and economic historians studying globalisation limit their study to the timeperiod after 1870 (Maddison, 1991, 1995 & 2001; O'Rourke & Williamson, 1999; Dowrick & DeLong, 2001; Lindert & Williamson, 2001; O'Rourke, 2001). We think it is a mistake to limit the time perspective to such a relatively speaking short time period, since the four eras of globalisation distinguished here have many aspects in common.
7. Some authors claim that the expansion of European capitalism in the sixteenth century marks the start of globalisation (Wallerstein, 1974; Waters, 1995).
9. One can observe that there has not been a corresponding liberalisation of labour flows, except within the European Union.
10. Bairroc & Kozul-Wright (1996, 5-6) remark that “most contemporary observers have differed in their description of the globalisation process, and have failed to construct a consistent theoretical explanation of what is driving it and where it might be going”.
11. This explanation contradicts the conventional wisdom, which suggests that increased globalisation would present a more hostile environment to small enterprises (Vernon, 1970; Horst, 1972; Caves, 1982; Chandler, 1990; Gomes-Casseres, 1997).
12. Confronted with competition from low-cost countries due to globalisation, large-scale producers in high-cost countries have been confronted with three alternatives not to lose market shares: (i) reduce wages and other production costs sufficiently to compete with the low-cost producers; (ii) substitute equipment and technology for labour to increase productivity; and/or (iii) outsource production from high-cost to low-cost locations. Many large companies in the high-cost countries have successfully restructured their activities in recent decades and thus preserved their viability.
13. Of course, one may ask why economic agents who develop new business ideas based upon knowledge spillovers choose to start their own new firms instead of selling their ideas to existing firms. The answer is provided by the information paradox (Arrow, 1962) and the existence of asymmetric information (Akerlof, 1970).
14. Admittedly, this gain may be short-lived if further entrepreneurs enter, or if incumbents in the region react to this unwanted competition. When the competition in the product market is imperfect, entrepreneurs may suffer from proximity of firms producing similar products, since geographical proximity increases competition in the product market (Fujita et al., Krugman & Venables, 1999).

15. This is particularly important in markets with discerning potential customers, who wish to search before purchasing.

16. This is of particular importance when knowledge is complex and perhaps tacit in nature (Jaffe et al., 1993).

17. A large supply of specialised workers in accounting, law, advertising, and different technical fields reduce the costs of starting-up and expanding new businesses (Krugman, 1993).

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