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Entrepreneurship and Development

- local processes and global patterns

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Entrepreneurship and Development: Local Processes and Global Patterns

by

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Abstract

The general motivation for this paper is the current interest in globalization as a phenomenon that strongly affects the conditions of local economic development. Our purpose is to contribute to some of the current development aspects, in particular those that foster the evolution of entrepreneurs in local-global processes. We present four eras of globalization, in recent decades and which have been described as different aspects of globalization are not new at all. In conclusion, we 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.

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Entrepreneurship and Development: Local Processes and Global Patterns

Few other issues attract so much international interest and debate as globalization. A search of the Internet using Google generate about 20 700 000 hits for the concept of globalization¹. 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. According to Clark (2000), it is 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 globalization as a process that erodes national boundaries, integrates national economies, cultures, technologies and governance, while it produces complex relations of mutual interdependence. Others see globalization as a process fuelled by, and resulting in, increasing cross-border flows of goods, services, money, people, information, and culture (Held, et al., 1999).

Observing that the above descriptions stress reduced friction and rigidity of cross-border flows, we suggest that globalization 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 at scope are exerting a growing influence at the local, regional, national, and supra-national level.² From an economic perspective, globalization³ 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.⁴

The general motivation for this paper can be found in the current interest in globalization as a phenomenon that strongly affects the conditions of local economic development. 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. 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 process driven by economic, political, and social entrepreneurs in localities, regions, and nations all around the globe.

1. Four eras of globalisation

Judging from the debate on globalization in recent years one might get the impression that globalization 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

¹ The spelling globalization generated about 6 500 000 hits.

² Actually, Keohane & Nye (2000) distinguishes three dimensions of globalization: i) economic globalization, characterised as long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges, ii) political globalization, characterized by a diffusion of government policies, and iii) social globalization, expressed as the spread of ideas, information, images, and people

³ Globalization has many dimensions. It is also possible to observe political, informational, cultural, etc., globalization.

⁴ Ethier (2005, 238) defines (economic) globalization as "a reduction of barriers – whether technological or legislative – to economic exchanges between nations".

decades and which have been described as different aspects of globalization 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 the global outreach, with associate adjustments of the economic and institutional superstructure.⁵ Actually, economic historians and structural economists have isolated three earlier such large structural changes (see, e.g. Pirenne, 1936 & 1956), which by Andersson (1986) has been denoted as logistical revolutions. However, here we prefer to call them eras of globalization.⁶ Each such era has its own process of network formation, where nodes expand and new links are established.

1.1 The first era of globalization

The first era of globalization 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 is 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 centres 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 forms a basis for increased trade. The evolvement of this system is documented in Braudel (1982) and characterised as an enrichment of commercial networks. One decisive feature of this first era of globalization was the integration of the two economic systems that was initiated at the 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 got its first large economic centres in Venice, Florence, Bruges, and Lübeck. However, the reach of this trading system went far beyond Europe since 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. Also international financial transactions developed during this era in a parallel and partly integrated process (Kindleberger, 1984; Braudel, 1994). Much of the described network formation is rather a development of a European market integration. However, it also contains the gradual growth of an Asia-Europe axis for global trade.

1.2 The second era of globalization

The second era of globalization started in the sixteenth century⁷, partly as a consequence of important developments within sea transportation. It may also be seen as an attack on the previous hegemony of Mediterranean merchants, initiated by in particular Lisbon. The

⁵ The start of globalization is a contested issue (Held, et al., 1999).

⁶ Some modern historians and economic historians studying globalization limit their study to time-period 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 16th century marks the start of globalization (Wallerstein, 1974; Waters, 1995).

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 Ocean-wide 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 gravitation 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 integral parts of emerging nation states. The new ports are the international interface of new states that are about to be internally integrated. The nation state observation also relates to the fact that between 1500-1700 these new states initiate a period of establishing colonies, another form of globalisation than just improved and denser networks for trade.

1.3 The third era of globalization

The third era of globalization is known as the industrial revolution and it started at the end of the eighteenth century in England. Its start and successful development is related to the development of a number of technical innovations and it could develop 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. Those new and relatively large-scale, and geographically sparse transportation and communication systems made it possible to establish vertical integration 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 is 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. 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 internationalization of the production of companies was initiated and the multi-national 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 grew rich 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 the World War I. In this peak period an international monetary systems, based on the gold standard, spreads to cover a large set of countries. Facilitated by such a multilateral payment system international trade expands rapidly, and is accompanied by the establishment of many new multinational companies. All this was possible because of novel channels for capital flows. It took a world war to break this path of globalisation (Kenwood and Lougheed (1971).

1.4 The fourth era of globalization

The current fourth era of globalization started in the middle of the second half of the twentieth century and manifested itself at almost the same time in a number of knowledge-intensive, often high-tech, urban regions and corridors. It is based on a rapid expansion of the networks of motorways and air connections and on an increased capacity and speed of information processing and transmission. It is characterised by a rapid knowledge-intensification, i.e. knowledge-deepening, that manifests itself through strongly increased R&D investments and a rapid increase of the share of knowledge-handlers⁸ in the labour force in the Western countries but increasingly so also in newly industrialised countries, not least in Asia. A major driving force behind this development is the growing role played by multinational enterprises, which have a special capacity in 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 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 out-sourced – off-shored – 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 global 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 specialize in the production of certain components or subsystems which along different stages of a supply chain end up in the assembly of final products. In each particular stage of such a series of coupled stages, the operations may ascertain that economies of scale are exploited. These changes in the structure of international production and trade have made the large multinational companies to the major players in the world economy. In the era of the multinational companies, increased international 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.⁹ In a parallel process, the international financial sector has developed substantially with a rapid introduction of institutional saving 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 the 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 evidently also brings about instability to the system.

⁸ Florida (2002) writes about the rise of the creative class.

⁹ One can observe that there has not been a corresponding liberalization of labor flows, except within the European Union.

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

2. What are the driving forces of globalization?

Before we go deeper into the current era of globalization, it is important to try to get a better understanding of the driving forces of the successive waves of globalization 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 globalization.¹⁰ One important reason today as well as in recent decades is that so much of the debate about the socio-economic development deals with short-run problems, such as inflation, unemployment and the balance-of-payment. 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, which determines the long-run development of regions as well as nations. Usually, various forms of infrastructure are regarded as artefacts. 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 with 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.

¹⁰ Bairoch & Kozul-Wright (1996, 5-6) remark that “most contemporary observers have differed in their description of the globalization process, and have failed to construct a consistent theoretical explanation of what is driving it and where it might be going.”

- The level, quality, and distribution of scientific, technological, entrepreneurial, and cultural knowledge, which may be both sticky in space and availability in networks.
- Basic values and attitudes to development, creativity, and entrepreneurship.

In 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 infrastructures make the way for catastrophic shifts or bifurcations that may stimulate rapid shifts in system behaviour and institutional settings, implying that one era of globalization 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 globalization can not be understood as a smooth continuous process. Instead it is discontinuous with leaps and dramatic changes in specialization and comparative advantages generating cumulative processes of growth and decline (cf. Mees, 1967).

Analysing more in detail each era of globalization it seems as if they all have been fuelled 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 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 an 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.

3. Local processes in the current era of globalisation

The perhaps 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; Loveman & Sengenberger, 1991; Acs & Audretsch, 1993; 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 globalization has rendered markets more volatile as a result from 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 stylized and personalized products facilitates the emergence of small niche producers.
- Deregulation and privatization 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 explanation for the new wave of entrepreneurship based upon the effects of increased globalization, which shifts the comparative advantages in the rich countries towards knowledge-based economic activities.¹¹ 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 countries¹², 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 network communication. Extending this argument, small firms can interact with large (multi-location) firms and having 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 get a new role in the knowledge-based, globalized 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 any new knowledge of their own (Acs & 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

¹¹ This explanation contradicts the conventional wisdom, which suggests that increased globalization 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 globalization, 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 labor 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.

innovative firms.¹³ Does this allow us to suggest that local networks and proximity externalities are basic characteristics of economic life in the globalizing economy?

In association with the above suggestion, 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 the knowledge potential to develop new innovative firms. There are also other important differences between functional regions, which influence the conditions for local entrepreneurial processes. These concern institutional frameworks and demand and supply conditions.

Effective institutions bring down 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 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 regional market potential and regional demand for new products, generate spatial variations in entrepreneurial opportunities. New firms to be launched are dependent upon a high enough regional demand, since 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)¹⁴,
- reduce their transaction costs (Quigley, 1998), e.g., search costs for finding customers and suppliers and/or the search costs for customers¹⁵ 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 larger potential knowledge spillovers (Acs, Audretsch & Feldman, 1992)¹⁶,

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, Krugman & Venables, 1999).

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

- take advantage of a large pool of well-educated and specialised labour¹⁷ (Marshall, 1920), and
- take advantage of a greater variety of non-traded inputs including physical infrastructure provided at lower costs (Krugman, 1991 a & b).

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 attracting 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 localization economies in a minor 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 have to be export-oriented from the beginning due to their limited local market. In other words, export 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.

4. Global patterns in the current era of globalisation

Returning to the current era of globalization, 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 globalization) and the emergence of worldwide financial markets (financial globalization). The evolution of world-wide markets, communications, and resources has in recent decades gone hand in hand with (i) the

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

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

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 is facilitated by decreasing costs for transportation of goods, people, and information, deregulation, liberalisation, and lowered barriers for international trade and foreign direct investments. The major forces of globalization 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 world-wide financial transaction flows have risen to enormous volumes.
- Increased institutional integration (EU, NAFTA, etc.).
- Increased import penetration (GATT, WTO, etc.), which has stimulated trade to expand much faster than GDP on a world-wide scale.

To a high extent globalization has been orchestrated by large multinational firms, who have used the emerging new economic arena to on the one hand out-source and off-shore 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 forty 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 network for knowledge interaction across country borders (Andersson, et.al., 2008).

The general effects of globalization might be summarised as follows. First, the past 15 years display an increased rate of global economic growth (Dreher, 2006), which is strongly stimulated by an 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 by 10 percent or more. Fifth, the diffusion of information becomes 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 increases, induced by push factors like conflicts and catastrophes as well as improved information to migrants about where to go, and how to do it. Eight, 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: which 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 observable as a rising share of

business services in 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 to 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 in two dimensions. First, manufacturing production is expanding fast in newly industrialised countries. Second, economic activities in the rich countries concentrate in large urban regions, which afford diversity of knowledge services to households and business.

For each of the economic effects of globalization 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 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. (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, which emphasis network formation for collaboration among competitors and interaction between firms, where one party is supplier and the other a customer.

For the transformation of the sector structure of the economies in the rich industrialised countries, we can notice a two-pronged change, where employment in the 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 increasing of the total labour force has its employment in firms classified as belonging to the service sector and, in particular, business service supply – with an edge in knowledge-intensive business services.

Table 1: Forms of market interaction and formation of interaction links

| <i>Firms as customers</i> | <i>Firms as suppliers</i> |
|---|---|
| <ul style="list-style-type: none"> • Systems-producing manufacturers transfer their production to suppliers of components and services (e.g. automobile producers) • Leading retail companies govern their suppliers both with regard to product design and technology (e.g. IKEA, Marks & Spencer) • Increased cooperation between customer firms and their suppliers, where end-product firms transfer product development tasks up-streams. | <ul style="list-style-type: none"> • Strategic alliances and partnership between competitors in R&D projects and business creation • Network relations among affiliates of multinational firms, allowing knowledge interaction to remain confidential • Network relations are initiated by suppliers of services and knowledge, often described as technology-based entrepreneurial firms (e.g. biotechnology) |

The declining share of employment in manufacturing activities has partly the nature of aggregate product cycles, along which firm strategies of labour-cost savings dominate the

development. To a larger extent before the trimming of production and cost-motivated relocations are associated with decomposition of a firm’s or a company group’s operation, such that 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 off-shoring (Johansson and Karlsson, 2009).

The growing share of employment in the service-sector firms is partly the consequence of the outsourcing of service activities from manufacturing and other goods-handling firms to new service providers which can adjust to better to changing demand and increase their scale and scope by having many customers. In addition, previous service supply by public producers has in recent decades been “out-sourced” to increase suppliers’ adaptation to customer demand and to increase incentives for cost efficiency. The describe 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 evolves. Such an overview is given in Table 2.

Table 2: The occupational structure in high-income economies of the world

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

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 the 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 (1991), 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-tech activities are favoured by proximity externalities in large urban (metropolitan) regions, where knowledge-intensive producer services, R&D, etc. Advanced business services prefer accessibility to customers across all sectors. Other knowledge-handling activities are attracted by mutual accessibility. The associated location dynamics is 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 off-shoring and FDI decisions. Pre-condition for the relocation process is 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 get routinised gradually are out-sourced and off-shored in the same, or they find their location in dispersed sub-centres of urban regions in the OECD area.

Small and medium-sized urban regions offer location for routine activities in goods-handling and information-handling activities which can gain competitive advantages due to local agglomerative processes that may generate specialised cluster in each individual region. This latter dynamics include 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 technique areas have been vital in the 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 allows outsourced and off-shored 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 suppliers and customers
- *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 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 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.

5. Conclusions

The general motivation for this paper was the current interest in globalization as a phenomenon that strongly affects the conditions of local economic development. Our purpose was 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. We stress in the paper that those global patterns of change that are observed, and reported in the media and by social scientists are the result of innumerable local process driven by economic, political, and social entrepreneurs in localities, regions, and nations all around the globe.

References

- Acs, Z.J. & D.B. Audretsch (1988), Innovation in Large and Small Firms: An Empirical Analysis, *American Economic Review* 78, 678-690
- Acs, Z.J. & D.B. Audretsch (1990), *Innovation and Small Firms*, The MIT Press, Cambridge, MA
- Acs, Z.J. & D.B. Audretsch (1993) (Eds.), *Small Firms and Entrepreneurship: An East-West Perspective*, Cambridge University Press, Cambridge
- Acs, Z.J., D.B. Audretsch & M. P. Feldman (1992), Real Effects of Academic Research: Comment, *American Economic Review* 82, 363-367
- Akerlof, G.A. (1970), The Market for “Lemons”: Qualitative Uncertainty and the Market Mechanism, *Quarterly Journal of Economics* 84, 488-500
- Andersson, M., Johansson, B., Karlsson, C. and Löf, H. (2008), Multinationals in the Knowledge Economy – a case study of AstraZeneca in Sweden, *CESIS Working Papers Series* No 154.
- Andersson, Å.E. and Johansson, B (1984), Industrial Dynamics, Product Cycles , and Employment Structure, *Working Paper 84-9*, International Institute for Applied Systems Analysis, Laxenburg, Austria.
- Andersson, Å.E. (1986), The Four Logistical Revolutions, *Papers of The Regional Science Association* 69, 1-12
- Anderson, Å.E. (1988), *Universitet – Regioners framtid* (Universities – the Future of Regions), Regionplanekontoret, Stockholm.
- Arrow, K.J. (1962), Economic Welfare and the Allocation of Resources for Invention, in Nelson, R.R. (1962) (Ed.), *The Rate and Direction of Economic Activities: Economic and Social Factors*, Princeton University Press, Princeton, NJ, 609-626
- Audretsch, D.B. & R. Thurik (2001), What’s New about the New Economy? Sources of Growth in the Managed and Entrepreneurial Economies, *Industrial and Corporate Change* 10, 267-315
- Audresch, D.B., et al. (2002), *Entrepreneurship: Determinants and Policy in a European-U.S. Comparison*, Kluwer Academic Publishers, Boston, MA
- Bairoch, P. & R. Kozul-Wright (1996), Globalization Myths: Some Historical Reflections on Integration, Industrialization and Growth in the World Economy, *UNCTAD Discussion Paper No. 113*, UNCTAD, Geneva
- Braudel, F. (1982), *Civilization and Capitalism 15th to 18th Century*, William Collins Sons & Co, London.
- Braudel, F. (1994), *A History of Civilizations*, transl. R. Mayne, Allan Lane, London
- Brock, W.A. & D.S. Evans (1989), Small Business Economics, *Small Business Economics* 1, 7-20
- Caves, R.E. (1982), *Multinational Enterprise and Economic Analysis*, Cambridge University Press, Cambridge
- Chandler, A. (1990), *Scale and Scope: The Dynamics of Industrial Capitalism*, Harvard University Press, Cambridge, MA
- Clark, W.C. (2000), Environmental Globalization, in Nye, J.S. & J.D Donahue (2000) (Eds.), *Governance in a Globalising World*, Brookings Institution Press, Washington, D.C., 86-108
- Desmet, K. (2000), A perfect Foresight Model of Regional Development and Skill Specialisation, *Regional Science and Urban Economics* 30, 221-242
- Dosi, G., et al. (1997), Industrial Structures and Dynamics: Evidence, Interpretations and Puzzles, *Industrial and Corporate Change* 6, 3-24

- Dowrick, S. & J.B. DeLong (2001), Globalisation and Convergence, Paper for NBER Conference on Globalization in Historical Perspective, Santa Barbara, CA, in Williamson, J. (ed.), *Globalization in Historical Perspective*, University of Chicago Press, Chicago, IL
- Dreher, A. (2006), Does Globalization Affect Growth? Evidence from a New Index of Globalization, *Applied Economics* 38, 1091-1110
- Ethier, W.J. (2005), Globalization, Globalisation: Trade, Technology, and Wages, *International Review of Economics and Finance* 14, 237-258
- Florida, R. (2002), *The Rise of the Creative Class*, Basic Books, New York, NY
- Fujita, M. & J.-F. Thisse (2006), Globalization and the Evolution of the Supply Chain: Who Gains and Who Loses?, *International Economic Review* 47, 811-836
- Glaeser, E. (1999), Learning in Cities, *Journal of Urban Economics* 46, 254-277
- Gomes-Casseres, B. (1997), Alliance Strategies of Small Firms, *Small Business Economics* 9, 33-44
- Held, D., et al. (1999), *Global Transformations*, Stanford University Press, Stanford, CA
- Horst, T. (1972), Firm and Industry Determinants of the Decision to Invest Abroad: An Empirical Study, *The Review of Economics and Statistics* 54, 258-266
- Hotelling, H. (1929), Stability in Competition, *Economic Journal* 39, 41-57
- Jaffe, A., M. Trajtenberg & R. Henderson (1993), Geographical Localisation of Knowledge Spillovers as Evidenced by Patent Citations, *Quarterly Journal of Economics* 108, 577-598
- Johansson, B. & C. Karlsson (2001), Geographic Transaction Costs and Specialisation Opportunities of Small and Medium-Sized Regions: Scale Economies and Market Extension, in Johansson, B., C. Karlsson & R.R. Stough (2001) (Eds.), *Theories of Endogenous Growth – Lessons for Regional Policies*, Springer, Berlin, 150-180.
- Johansson, B and C. Karlsson (2009), , in Capello, R. and P. Nijkamp (Eds.), *Handbook of Regional Growth and Development Theories*, Edward Elgar, Cheltenham, pp. 239-255.
- Kenwood A.G. and Lougheed, A.L. (1971), *The Growth of the International Economy 1820-1960*, George Allen & Unwin, London.
- Karlsson, C. & A. Manduchi (2001), Knowledge Spillovers in a Spatial Context – A Critical Review and Assessment, in Fischer, M.M. & J. Fröhlich (2001) (Eds.), *Knowledge, Complexity and Innovation Systems*, Springer, Berlin, 101-123
- Kindleberger, C.P. (1984), *A Financial History of Western Europe*, Allen & Unwin, Boston, MA
- Kobrin, S.J. (2002), Economic Governance in an Electronically Networked Global Economy, in Hall, R.B. & T.J Biersteker (2002) (Eds.), *The Emergence of Private Authority in Global Governance*, Cambridge University Press, Cambridge, 43-75
- Koehane, R.O. & J.S. Nye (1977), *Power and Interdependence: World Politics in Transition*, Little, Brown & Co, Boston, MA
- Koehane, R.O. & J.S. Nye (2000), Introduction, in Nye, J.S. & J.D Donahue (2000) (Eds.), *Governance in a Globalising World*, Brookings Institution Press, Washington, D.C., 1-44
- Krugman, P. (1991a), Increasing Returns and Economic Geography, *Journal of Political Economy* 99, 483-499
- Krugman, P. (1991b), History and Industry Location: The Case of the Manufacturing Belt, *American Economic Review* 81, 80-83
- Krugman, P. (1993), First Nature, Second Nature and Metropolitan Location, *Journal of Regional Science* 33, 129-144

- Kumar, S. & D. Liu (2005), Impact of Globalization on Entrepreneurial Enterprises in the World Markets, *International Journal of Management and Enterprise Development* 2, 46-64
- Fujita, M., P. Krugman & A. Venables (1999), *The Spatial Economy. Cities, Regions and International Trade*, The MIT Press, Cambridge, MA
- Lindert, P. & J. Williamson (2001), Does Globalization Make the World More Unequal?, *NBER Working Paper No. 8228*, National Bureau Of Economic Research, Cambridge, MA
- Loveman, G. & W. Sengenberger (1991), The Re-emergence of Small-Scale Production: An International Perspective, *Small Business Economics* 3, 1-38
- Maddison, A. (1991), *Dynamic Forces in Capitalist Development: A Long-Run Comparative View*; Oxford University Press, Oxford
- Maddison, A. (1995), *Monitoring the World Economy 1892-1992*, OECD, Paris
- Maddison, A. (2001), *The World Economy: A Millennium Perspective*, OECD, Paris
- Marshall, A. (1920), *Principles of Economics*, 8th ed., Macmillan, London
- Mees, A. (1975), The Revival of Cities in Medieval Europe, *Regional Science and Urban Economics* 5, 403-425
- Mills, E.S. & B.W. Hamilton (1984), *Urban Economics*, 3rd ed., Scott, Foresman, and Co., Glenview, IL
- Norris, P. (2000), Global Governance and Cosmopolitan Citizens, in Nye, J.S. & J.D. Donahue (2000) (Eds.), *Governance in a Globalising World*, Brookings Institution Press, Washington, D.C., 155-177
- O'Rourke, K.H. (2001), Globalization and Inequality: Historical Trends, *CEPR Discussion Paper No. 2865*, Centre for Economic Policy Research, London
- O'Rourke, K.H. & J.G. Williamson (1999), The Heckscher-Ohlin Model between 1400 and 2000: When It Explained Factor Price Convergence, When It Did Not, and Why, *NBER Working Paper No. 7411*, National Bureau Of Economic Research, Cambridge, MA
- O'Rourke, K.H. & J.G. Williamson (2006), Around the European Periphery 1870-1913: Globalization, Schooling and Growth, *European Review of Economic History* 1, 153-190
- Pirenne, H. (1936), *Economic and Social History of Medieval Europe*, Transl. I.E. Clegg, K. Paul, Trench, Trubner & Co, Ltd, London
- Pirenne, H. (1956), *Medieval Cities: Their Origins and the Revival of Trade*, Transl. F.D. Halsey, Double Day Anchor, Garden City, NY
- Quigley, J.M. (1998), Urban Diversity and Economic Growth, *Journal of Economic Perspectives* 12, 127-138
- Schumpeter, J.A. (1934), *The Theory of Economic Development*, transl. R. Opie, The MIT Press, Cambridge, MA
- Spufford, P. (2002), *Power and Profit: The Merchant in Medieval Europe*, Thames & Hudson Ltd, London
- Stultz, R.M. (2005), The Limits of Financial Globalization, *Journal of Finance* 60, 1595-1638
- Vernon, R. (1970), Organization as a Scale Factor in the Growth of Firms, in Markham, J.W. & G.F. Papanek (1970) (Eds.), *Industrial Organisation and Economic Development*, Houghton Mifflin, Boston, MA, 47-66
- Wallerstein, J.G. (1974), *The Modern World-System*, Academic Press, New York
- Waters, M. (1995), *Globalization*, Routledge, New York