

1. Introduction

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1.1 INTRODUCTION

The global economic landscape has in recent decades exhibited a considerable dynamism. This is the result of fundamental transformations of the world economy, which in many respects have changed the structure and the functioning of our economies and our societies. The current world economy is characterized by an increase in knowledge about production, innovation, renewal and growth (Karlsson et al., 2014; Andersson et al., 2012). It is the geography of growth as well as the geography of production and trade, which looks quite different today than the appearance of the same geography before the 1990s.

One important component of this change is the increasing importance of urban regions. Today, growth and production involve a large and growing number of urban regions, and modern international trade has sometimes been described as trade between urban regions – not only in advanced economies, but also increasingly including urban regions in Asia and South America. This reflects the way that large urban regions function as engines for economic growth, driven by the scale advantages system (cf. Krugman, 1991). The emergence of this new ‘urban world’ is also associated with larger volumes of R&D being distributed over an increasing number of large and growing urban regions involving countries in Asia in general and China in particular. Today these large urban regions are playgrounds for competitive behaviour and rapid economic dynamics. They are well connected by means of digital connections, media, air connections, imports and exports, supplier–customer relations, internal company networks of multinational firms, researcher networks, etc. and they offer a large regional R&D, knowledge and learning base (Acs et al., 2002). This implies that these large, functional, urban regions function as information, knowledge, innovation and entrepreneurship hubs and gateways in a global urban network (Burger et al., 2009) as well as a habitat for international migrants. Continuous

international migration tends to play a major role with respect to urban multicultural diversity and social and cultural equality, and foreign migrants tend to settle down in patterns in urban regions where they form ethnic or language clusters. Moreover, the interaction of economic, political, social and technological forces in urban regions makes them international 'power houses' with a strong impact in terms of global control and command, not only due to their size but also because of their creative, innovative and entrepreneurial potential (Glaeser and Kerr, 2009).

The rapidly growing importance of the large urban regions as centres for knowledge production, consumption, trade and growth has substantial implications for many medium-sized and small regions. What we can observe today is a growing spatial divide where some large urban regions and many medium-sized and small regions face increasing problems with decreasing labour demand, increasing unemployment, lower purchasing power, a shrinking tax base, an ageing population and a loss of many private and public services.

In view of these trends, it is vital to get a better understanding of both the characteristics as well as the specific drivers of the geography of growth and how these may differ between spatial contexts, how hurdles and barriers to growth in different types of regions can be dealt with, how to what extent resources in different areas can be developed, and how the potential of different resources to stimulate growth can be realized. This book presents a collection of chapters that, together, deals with these issues. The chapters are organized into four parts, and we describe each chapter below.

1.1.1 Part I: Geography of Structural Change, Employment and Productivity

Long-running growth rarely means that we do more of the same. Instead, growth is often associated with qualitative changes in economies where new industries and new technologies develop, new means of production are employed and the relative demand for different types of skills and competences shifts. Structural change is thus inherent in economic growth. This part of the book includes contributions that deal with the geography of these phenomena. It contains chapters that study the capacity of regions to re-organize subsequent displacement, where spatial convergence processes are their links to structural change, local drivers of employment growth and productivity as well as local drivers of change and development.

1.1.2 Part II: Geography of Entrepreneurship and Business Dynamics

Just as structural change is inherent in economic growth, one can argue that entrepreneurship and business dynamics constitute core drivers of the former. Entrepreneurship in the form of self-employment is also a means by which individuals can enter the labour market and capitalize on their skills and abilities. The chapters in this part focus primarily on local determinants of entrepreneurship and business dynamics, in terms of the probability of new firms being established as well as the survival of new firms in different local contexts. The chapters span the impact of policies for regional broadband investments on new firm formation, the role of agglomeration phenomena for the survival of new firms, and the survival of local firms started by individuals of different nationalities as well as the institutional foundations of local entrepreneurship.

1.1.3 Part III: Geography of Innovations, Cooperation and Growth

The third part of the book includes chapters that deal with the geography of innovation, cooperation and growth. Innovation is naturally a key determinant of growth. Inter-regional and cross-border cooperation is also an important means by which firms and entrepreneurs can access resources not available locally. Cooperation with actors in other regions or cities can thus be one way to compensate for limited local resources, i.e. it may be described as a strategic tool to deal with remoteness. This part includes chapters that study cross-border innovation cooperation and the geography of innovation through the lens of creative workers and high-tech clusters, as well as the role of local knowledge resources in driving new export products.

1.1.4 Part IV: University Spin-Offs: Barriers and Challenges

One common policy to stimulate the growth and development of various cities and regions is to establish local institutions of higher education, most notably universities. A key idea in such strategies is that the education and research activities that such organizations bring to a region will strengthen the local skill base, thereby strengthening and upgrading local industries. The research literature identifies a number of ways in which local universities impact the regions hosting them. One specific mechanism is university spin-offs. Although the exact definition of university spin-offs often differs from study to study, the main argument is that spin-offs constitute a means by which knowledge and technologies developed at universities are commercialized and generate jobs and growth, often locally. However,

spin-offs from universities do not occur automatically. Several hurdles and barriers need be overcome. This part of the book presents one contribution that analyses what these hurdles are and how they may be handled, with another contribution analysing the reasons many university spin-offs remain small. The local/regional aspect is key in both studies.

It is our hope that the contributions in this book will be of interest to both researchers and policy makers in all regions. We are confident that the contributions in the book will stimulate the interest of both and provide a basis for a better understanding of the geography of growth, as well as stimulate a debate on the role policy may play in different spatial contexts.

The rest of this introductory chapter is organized as follows. Section 1.2 presents the broad patterns of recent trends in the global economy and links this to the geography of growth. The aim is to present the 'big picture' as a context for the individual chapter contributions in the book, and also to discuss typical arguments about the success factors and challenges of different types of regions. Section 1.3 summarizes the chapters in more detail.

1.2 A GLOBAL ECONOMIC LANDSCAPE IN TRANSITION: A NEW URBAN WORLD?

Today it is more or less a global trend that more and more people move from more sparsely populated areas to more densely populated ones, i.e. to urban regions. Although there are various reasons for this trend, a general argument is that people seek more promising socio-economic opportunities and an urban way of life characterized by a specific urban identity (Birch and Wachter, 2011). The share of the world's population living in urban regions is expected to rise from the current level of more than 50 per cent to about 80 per cent by 2050. Interestingly both the Organisation for Economic Co-operation and Development (OECD) and non-OECD countries show a gradual structural rise in the urbanization level despite ageing in most and population decline in some OECD countries. The current population movement towards urban regions is leading to large-scale urbanization and is the result of both the natural population increase and large migration movements, partly over national borders.

This ongoing urbanization implies that in coming decades urban regions also have the potential to function as growth engines in the world economy. They offer a wealth of challenges and opportunities not only in the domains of urban production and urban consumption, but also in terms of urban resource and infrastructure potentials (Duranton, 2007). The

large urban regions are diverse and distinctive in their history and cultural heritage, as well in their ways of coping with political, economic, social and environmental challenges in a globally networked economy. However, not all urban regions have the basic conditions and/or the capabilities to take advantage of the current urbanization trend. Thus, the current rate of urbanization places a heavy burden on urban regions to provide suitable conditions for growth in terms of material and non-material infrastructures, facilities for enterprises, housing etc., and also in terms of effective and rapid urban planning and administration and an avoidance of red tape to generate those positive externalities that spur further urban growth. At the same time they need to effectively handle negative externalities of urban growth such as pollution, congestion, crime and security threats and social degradation.

The question of whether the positive or negative externalities will take the lead depends of a mix of factors, some of which can't be influenced by policy makers. However, in most cases the economies of agglomeration and spatial proximity seem to outweigh the negative externalities of urban growth (Glaser, 1998). In many cases urban regions seem to be able to offer and regenerate conditions for working, living, doing business and visiting that are much more efficient, productive and innovative than any other type of settlement pattern. The spatial concentration of activities, which involves spatial but possibly also other types of proximities, increases the opportunities for interaction, knowledge transfers and spillovers, which reduces the costs of obtaining and processing knowledge. Knowledge-intensive firms and people prefer to interact with each other in urban regions to reduce interaction costs and they are more productive when they are located in urban regions.

Entrepreneurship is one of the most important dynamic forces shaping the changes in the urban landscape. Urban regions function as the cradle of new industries, supplying new innovative products (goods and services) to households, firms and public sector organizations. Entrepreneurs and firms in the early stages of the product life cycle dealing with manifold uncertainty prefer locations where new and specialized knowledge is abundantly available, i.e. urban regions (Cohen and Paul, 2005). Urban regions also offer a rich potential for a wide array of innovative firms and industries. These firms and industries can achieve more sustainable business success in the dynamic and competitive urban regions than other industries (Beise and Stahl, 1999). The reason of course is that the behaviour and performance of firms in terms of innovation and productivity is a function of the spatial context within which they operate. An urban context that offers high-quality regional resources influences the behaviour of firms, creates new entrepreneurial, market and profit potential and

offers novel opportunities for both entrepreneurs and incumbent firms. In terms of regional resources, urban regions host a wealth of cultural attractions that improves location quality, which create a foundation for them to compete for the favours of potential domestic and international visitors and residents. An attractive cultural heritage, which can be seen as a self-identifying landmark for an urban region, is increasingly recognized as making an important contribution to the image of urban regions. The awareness of the value and the increased interest in cultural heritage plays a central role in generating a new urban vitality including new lifestyles and general cultural development.

Andersson (1985) argues that the current urban epoch, like earlier urban epochs, has its roots in the current logistical revolution, which has drastic implications for the transport and communication systems, accessibility and connectivity within and between urban regions. The current logistical revolution stimulates urbanization by strengthening the static and dynamic positive spatial externalities in urban regions. These spatial externalities have varying forms including localization, urbanization and learning economies or, in the words of Duranton and Puga (2004), matching, sharing and learning economies and over time these different forms of externalities interact and even stimulate each other.

However, different urban regions are facing different locational attributes including different combinations of positive and negative externalities. This implies that even if many urban regions are functioning as growth hubs, there are many urban regions that underperform and that can be classified as problem regions. However, even those urban regions that currently are high-performance regions cannot take this high performance as a given forever. The history of urban regions gives numerous examples of high-performance urban regions that have run into very substantial problems due to technological, structural and/or political changes. We must also acknowledge that there is substantial competition between the high-performance urban regions in terms of having and preserving the status of a leading hub in terms of financial, R&D, innovative, entrepreneurial, media, commercial and cultural activities, as well as tourism, etc. This competition between urban regions is mainly the outcome of a self-organized process induced by the openness and interdependence of these regions. However, on top of this, urban regions may be using various policy measures to enhance their international image, their socio-economic or cultural profile, or their share of international resources and revenues in order to reinforce their relative position.

This discussion points to three major medium- and long-term challenges associated with the current geography of growth:

1. How can high-performance urban regions preserve and develop their unique competitive situation?
2. How can under-performing urban regions improve their attractiveness and competitiveness?
3. How can other regions prosper in the current urban area?

To deal with these challenges it is important for all types of regions to stimulate the growth-enhancing factors and to dampen the growth-hampering factors, to deal with the multiple layers of actors and structures within regions and to identify the role of intra- and extra-regional force fields and networks.

1.2.1 What Makes Successful Urban Regions? An Exposé of Arguments

What are the factors that change some urban regions into high-performance regions? What are the factors that determine the competitiveness of high-performance urban regions in the medium- and long-term? How can they preserve and develop their competitiveness?

High-performance urban regions are seedbeds and breeding places for creativity, innovation, entrepreneurship and spatial competitiveness (Glaeser, 2011) and form the heart of a dynamic growing society by being the engines and powerhouses of growth and economic vitality. They supply heterogeneous products and compete in terms of quality, attractiveness and diversity to attract, retain and even nurture highly mobile creative and innovative firms, entrepreneurs and labour, and also residents and visitors. It is often claimed that to be competitive, urban regions (or large cities) need to offer the highest possible quality or image in terms of culture, cultural diversity, media, arts, entertainment, sports, creativity, innovativeness, knowledge, entrepreneurship, financial services, knowledge-intensive business services, open and attractive urban milieu and atmosphere, intra- and extra-urban networks, density, proximity, etc.

In this global competitive situation, the demands for high-quality infrastructures, amenities and public services are subject to permanent change. This leads to the common argument that urban regions need to maintain and expand their cultural capital including the physical and tangible artefacts that make up their diverse cultural heritage, since the cultural capital offers an innovative and open ambience that stimulates creative thinking and entrepreneurship. One important objective of this more or less constant upgrading is to induce and stimulate firms and entrepreneurs to develop new ideas, to look for new business opportunities, to design new forms of technology or architecture, to experiment with new business models, to suggest new paths to sustainable development and to

stimulate young people to take higher education and to become entrepreneurs (Karlsson and Gråsjö, 2013). However, the presence of firms, people and entrepreneurs is dependent not only upon the availability and accessibility of production facilities and consumer amenities but also on the diversity of seedbed conditions. In particular, the cultural, creative and innovative sectors are dependent upon good seedbed conditions (van Oort, 2004).

This is often interpreted that urban regions need to strengthen their base in different respects, to repeatedly upgrade areas in the region to create attractive and high-quality places to live, work and do business, and to incorporate technology, innovation and entrepreneurship into the overall urban development strategies.

Successful and high-performance urban regions seem to share a number of critical characteristics. They tend to be characterized by a very high inter- and intra-regional accessibility for passenger and freight transport, in particular for rapid modes of transport, i.e. air travel, cars and fast trains, and by the availability of information through electronic communication. This high accessibility makes them the preferred meeting places for decision-makers in politics and companies, businessmen and women and all kinds of knowledge handlers. They have a critical mass in many different respects such as creativity, public and private R&D, innovation, higher education, highly educated labour, media, knowledge-intensive business and financial services, etc. This also means that they are attractive in terms of the jobs and living conditions they offer, in order to keep and attract skilled and, in particular, highly educated people, and the labour and service supply and location options they offer, in order to keep and attract, in particular, high-tech and other knowledge-intensive companies. Another critical characteristic is that they offer an extremely broad range of different specializations among firms but also at an occupational level. They are adaptive, flexible and open to new ideas, trends and activities, including in creative, innovative and entrepreneurial areas. There are mechanisms by which older, non-competitive activities are identified, thus allowing room for new profitable activities to expand.

Some urban regions are facing serious challenges to increase their attractiveness and competitiveness. The repositioning of under-performing urban regions calls for a solid evidence-based benchmarking analysis. A key issue concerns the conditions that create new opportunities for its current labour force, current companies and current potential entrepreneurs of such dimensions that they also attract people and not least labour, companies and potential entrepreneurs from other regions. Such new opportunities are necessary for the increased attractiveness and competitiveness that can lead to higher socio-economic prosperity

and well-being and must be built upon creative and knowledge-intensive strategies that can initiate new dynamic and hopefully irreversible urban development trajectories (Duranton, 2007). The generation of new opportunities involves but doesn't end with the development of advanced infrastructures and logistical systems, advanced business facilities, etc., which are needed to create an accessible, efficient and well-functioning urban region. To increase their potential to generate new opportunities, under-performing urban regions must initiate a transition towards a knowledge city with a large enough stock of knowledge handlers as well as a plethora of various knowledge organizations to achieve a critical mass in generating new ideas, new knowledge, innovations and new products that are unique enough to compete with products from the high-performance urban regions. Learning and the development of new and more advanced skills in the labour force are at the kernel for such a strategy.

1.2.2 Opportunities and Challenges for Small and Medium-Sized Regions

Small and medium-sized regions (SMRs) present a different and to some extent more difficult case. Certainly, there are many SMRs that are doing well, but the general picture is that most SMRs face problems and, in many cases, severe problems. Many SMRs face a declining population, while the population that remains is ageing. Population decline implies income decline, which is equated with decreasing purchasing power and, in SMRs, with local taxation becoming a decreasing tax base. Some rural areas in particular may have specialized in declining sectors such as agriculture, forestry and manufacturing. Compared to urban regions, many SMRs are also 'thin' in terms of infrastructure.

Key arguments in the policy literature are that any attempt to increase the competitiveness and attractiveness of SMRs should start with a thorough investigation of the strengths and weaknesses of each region. The implementation of such a long-term development strategy needs a well-designed governance structure capable of thinking in new ways. The resource base is naturally a critical factor, and consists not only of natural resources but also of slowly changing factors such as industrial structure, labour skills, entrepreneurial tradition, institutions, social capital and even accessible demand. Resource endowments that are truly unique or difficult to imitate have a strong base for comparative advantages.

Our discussion in this book concerns so-called horizontal vs. vertical policies. Vertical development policies are typically defined as those designed to support existing clusters as well as cluster embryos, or specific

industries. Such policies are risky, since they can lead to a lock-in in sectors and/or technologies that are not competitive, not even in the medium term. Horizontal development strategies include strategies focused on providing good general conditions both for existing clusters and cluster embryos and also for other sectors. Prime examples of horizontal development policies are an upgrade of the human capital supply and improvements to general transport and communication infrastructures.

1.3 THE NEED TO UNDERSTAND THE NEW GEOGRAPHY OF GROWTH

It is clear that the geography of growth is quite different today than it was 50 years ago, and this implies challenges for all types of regions. The discussion above only provides a very partial overview. It is equally clear we do not fully understand the current and future political challenges generated by the new geography of growth. There is a strong need for clear, evidence-based strategies and policy proposals to meet the challenges created by the new growth landscape. We know that this book will only bridge a tiny bit of the current knowledge gap but we also hope that it will stimulate further research in the field.

1.4 SUMMARY OF THE CHAPTER CONTRIBUTIONS

The subsequent chapters are arranged in a sequence following the above-mentioned four parts: (1) Geography of Structural Change, Employment and Productivity; (2) Geography of Entrepreneurship and Business Dynamics; (3) Geography of Innovations, Cooperation and Growth; and (4) University Spin-Offs: Barriers and Challenges.

1.4.1 Part I: Geography of Structural Change, Employment and Productivity

In Chapter 2 Nyström and Ros explore the regional differences in the capacity to absorb employees after a business closure. They seek to fill the knowledge gap that may arise in a region after business closures by using Swedish matched firm-employee data during the time period 2001 to 2009. These findings suggest substantial regional variations in terms of displaced workers and re-employments within regions. No correlation is found between shares of displacements and capacity of re-employment

and Nyström and Ros suggest that other regional factors explain the substantial regional variations of re-employment.

Arvemo and Gråsjö show a cross-border study in Chapter 3 between Sweden and Norway and the extent to which economic productivity in the border regions is affected by accessibility to highly educated labour. This novel cross-border perspective of the analysis shows that inter-regional cross-border accessibility to human capital does indeed influence productivity on both sides of the border. This suggests that functional economic regions may expand beyond national borders.

The objective of Chapter 4 by Cornett is to present a view on the determinant of the process of alterations of inter- and intra-regional balance in Europe, with specific focus on non-metropolitan regions. Declining regions and a rapid urbanization is more or less an apparent challenge in all European countries. Hence, this paper addresses the difficulty of having an inclusive growth vision and of putting the optimal growth factors into practice.

In Chapter 5, Naveed finishes this sub-section by adding knowledge to the convergence debate in Europe. This is done by looking at the role of structural change in the process of labour productivity convergence at country, regional and industry levels. The author adds some important knowledge to the debate by finding that the speed of convergence, when incorporating structural change, is faster at the regional level compared to country and industries. The author argues that this might be explained by regions being more specialized, united and integrated than countries are.

1.4.2 Part II: Geography of Entrepreneurship and Business Dynamics

Part II continues with the main theme, geography and growth, but shifts perspective into business dynamics beginning with Chapter 6 by Fredin and Jogmark, investigating how local differences in informal institutions possibly affect entrepreneurship. They differentiate between types of institutional foundations and find that variations in these can affect the local social acceptance of entrepreneurship. This is an important contribution in terms of business dynamics and regional renewal.

The objective of Chapter 7 by Parajuli and Haynes is to study the relation between broadband and business dynamics in terms of establishing new firms. While this study uses US data, it is still a highly relevant topic, both in the US and in Europe. Infrastructure is often seen as part of the capital stock in a region or nation and one may take the theoretical approach that broadband offers various business possibilities. Following the results of the analysis, the author suggests that while broadband may

play a role in establishing new firms, simply increasing the number of operators does not necessarily attract new firms to a region.

Chapter 8 by Jienwatcharamongkhol and Tavassoli investigates whether individual characteristics of the founders of self-employed firms, together with agglomeration economic variables, affect the survival of these firms. By using Swedish data from 1990 to 2010 the results show the important finding that individual factors outweigh the external factors, those relating to the regional economic milieu. The authors suggest that this indicates that self-employed firms gain only a few advantages from agglomeration economies.

Chapter 9 by Schutjens, de Vries and Risselada is the final contribution in this sub-section and is an analysis of life durations of new firms in Amsterdam and how they differ between native and immigration entrepreneurs. With their multivariate analysis they combine the perspective of the entrepreneur with the firm and neighbourhood factors. The initial and substantial variations in survival rates between different ethnical groups and also the mechanism of survival is dynamic over time.

Chapter 10 by Stone analyses the role of global value chains in bilateral trade for Swedish industries. This offers an important perspective in terms of business dynamics in a globalized economy with new patterns of product fragmentation in international trade. This chapter uses OECD data to analyse trade patterns in Swedish industries to show how varying outsourcing patterns can change the structure of trade. The major contribution of this chapter comes from the findings that despite the growing importance of global value chains in world trade, factor endowments are still a major driver of trade.

1.4.3 Geography of Innovations, Cooperation and Growth

Part III provides a number of perspectives of regional innovation beginning with that of new exports. Chapter 11 by Warda and Johansson analyse how a firm's capacity to absorb knowledge affects new exports in the Swedish manufacturing sector. This chapter partly places itself within the literature of formal and informal networks. By distinguishing between a firm's internal and external knowledge sources, the authors suggest that the higher the knowledge absorption within firms, the higher the firm's export renewal. However, this is further enhanced with those external knowledge sources.

In Chapter 12 Hjaltadóttir, Makkonen and Sørensen analyse the determinants of cross-border innovation cooperation in Denmark by focusing on partner selection. They have an important geographical perspective by using the location of partners as an explanatory factor. The main finding

is that the decision of choosing an innovation partner in Denmark is independent from choosing a partner abroad, whereas the choice between foreign partners from different locations is not independent.

In Chapter 13, Alfken presents a novel approach to the geography of creativity. He combines theory from economics and psychology and suggests that the agglomeration theories relating creativity to positive regional economics have further perspectives. By using data from the German Socio-Economic Panel, Alfken suggests that there are soft-location factors related to the geography of creative individuals that are not caused by self-selection. However, he also emphasizes the uncertainty of the direction of causality.

1.4.4 University Spin-Offs: Barriers and Challenges

Part IV consists of Chapter 14 by Goldstein, Peer and Sedlacek where they look at the barriers to the generation of university spin-offs. This case study is of Vienna but the topic has further relevance which suggests future in-depth regional studies. The authors present a study with results that suggest that while the local innovation ecosystem of Vienna has strengths and weaknesses, the latter are related to inadequate levels of local coordination and synergy among key stakeholders such as universities, funding resources and policy makers. As a conclusion to these results, the authors also suggest possible actions that could increase the occurrence of university spin-offs.

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