The Role of SMEs and Entrepreneurship in a Globalised Economy
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Expert report no. 34 to Sweden’s Globalisation Council
Preface

The future prosperity of any economy depends to a considerable extent on its success in promoting entrepreneurship, innovation, and the effective and prompt absorption of technological advances developed abroad. In all of these processes, small firms and, in particular, those recently established, play a critical role in the development and growth of an economy. This is the main conclusion from the well-renowned professor William J. Baumol’s chapter presented in this book. The different analyses in the report span a wide range of topics, ranging from firm level studies to those more associated with a regional or national context. Examples are micro-oriented issues related to team building in entrepreneurship and export performance distributed on size classes of firms, as well as more aggregate phenomena such as shifts in the societal norm from a managerial to a more entrepreneurial paradigm, as well as trends of “glocalisation” at the regional level.

Five out of eight chapters are concerned with analysis in developed countries while the remaining three chapters take a developing country perspective. The authors present policy conclusions regarding clusters and industrial districts, how to counter entrepreneurship challenges and to exploit opportunities from a global geopolitical view.

The authors are all well-renowned international and national researchers in the field of innovation, entrepreneurship and SMEs: Zoltan J Acs, Howard E Aldrich, David B Audretsch, William J Baumol, Sylvain Boko, Elizabeth J Gatewood ,Bengt Johannisson, Anders Lundström (ed), Paul D Reynolds, Charles Sabel and A Roy Thurik. The main author of each chapter has been awarded The FSF-Nutek Award on entrepreneurship and small business research, from 2009 renamed Global Award for Entrepreneurship Research. The authors take full responsibility for the results and the analyses presented in this report.

Stockholm, April 2009
Pontus Braunerhjelm
Principal Secretary, The Globalisation Council
Globalisation Council members

The Swedish Government has established a Globalisation Council to promote a deeper knowledge of globalisation issues, draw up economic policy strategies and broaden public dialogue about what needs to be done to ensure that Sweden can compete successfully in a world marked by continued rapid globalisation. The Council’s work is expected to lead to proposed measures whose purpose, broadly defined, will be to boost Sweden’s competitiveness and attractiveness on the international scene.

In addition to regular Council meetings, background reports will be written by independent researchers and other experts. These will be quality assessed by reference groups composed of representatives from academia and the Government Offices and by leading economists on the Council’s Advisory Board. The work of the Council, which must be completed well before the 2010 general election, will be documented in a final report along with economic policy recommendations. Plans are also being drawn up for a number of external activities, such as conferences and seminars.

The Council comprises representatives from the business sector, the Government, social partners, the government administration, the media and the research community. It is chaired by the Minister for Education and Research, Lars Leijonborg. The Principal Secretary is Pontus Braunerhjelm.

The other members are:
- Kristina Alsér, Mercatus Engineering AB, County Governor, Kronoberg County
- Hans Bergström, columnist and reader in political science
- Carl Bildt, Minister for Foreign Affairs
- Urban Bäckström, Director-General, Confederation of Swedish Enterprise (Svenskt Näringsliv)
- Lars Calmfors, professor of international economics
- Per Carstedt, CEO, SEKAB Group
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- Sven Otto Littorin, Minister for Employment
- Wanja Lundby-Wedin, President, Swedish Trade Union Confederation (LO)
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- Elisabeth Nilsson, President, Swedish Steel Producers’ Association (Jernkontoret)
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- Carl-Henric Svanberg, President and CEO, Ericsson
- Lena Treschow Torell, Chair, Royal Swedish Academy of Engineering Sciences (IVA)
- Harriet Wallberg-Henriksson, President, Karolinska Institutet
- Marcus Wallenberg, Chair, International Chamber of Commerce (ICC)
- Olle Wästberg, Director-General, Swedish Institute (Svenska Institutet)
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Globalization and its effects on SMEs and entrepreneurship can be regarded in a number of ways. The following report is a good example of this. The Swedish Foundation for Small Business Research (FSF) has asked a number of outstanding international and national researchers in the field of innovation, entrepreneurship and SMEs to give their views on what globalization mean in these perspectives.

There were no real limitations of what type of subject that could be analysed and described. Furthermore, the researchers in this book represent different research disciplines. Therefore, as a reader, you will find great variations of the different subjects treated in the different chapters. The book is dealing with specific issues like research on team building in entrepreneurship which is dealt with in the chapter by Howard Aldrich or export issues analysed by Paul Reynolds. In the book there are also presentations concerning trends in the development from a managerial society to a more entrepreneurial one dealt by David Audretsch and Roy Thurik or the trend there one could realise both a global and a regional/local development, which is named global/localization by Bengt Johannisson. Different roles for different actors in the innovation process are described by William J Baumol. All these papers are mainly describing and analyzing what is ongoing in developed countries while in three chapters different perspectives are described also involving perspectives of the developing countries. One chapter by Charles Sabel is about how developing countries have discovered clusters and industrial districts building, while Elisabeth J Gatewood and Sylvain Boko describe entrepreneurship challenges and opportunities in the developing world. Finally, Zoltan Acs is interested in the global geopolitical perspective discussing what the demands will be in the future for Europe to cope with the increasing importance of new Asian markets.
Overall the different chapters give a wide perspective of effects from globalisation in to the world of innovation, entrepreneurship and SMEs. In this brief introductory chapter some insights from the different chapters are presented. The descriptions are following the idea presented in this section, i.e. first to give some conclusions from the paper of Audretsch and Thurik on the development process, then to present conclusions from the different subjects, and finally have some comments of more generally issues concerning worldwide perspectives including the developing countries.

One main conclusion is that changes by globalization will affect the SMEs and entrepreneurs in different type of economies both on a national and regional perspective. The world is globalized so is the world for entrepreneurs and innovations. All type of companies will be affected by the changes that one nowadays could observe, not only SMEs or innovative entrepreneurship but of course also the behaviour of multinationals and large firms, and the relations between large and small firms. More or less every type of firms could in the future be an actor on a global market. One reason being the new technology which means that even very small local firms will have such a possibility; a factor which is analysed in this report. On the other hand, this means an increased competition from many more firms than one is used to realise. One factor is the use of Internet business for such an increased competition. Summing up there are a lot of new opportunities as well as a lot of new threats for almost every company independent of how big or small they are.

David Audretsch and Roy Thurik present an approach describing some of the observed changes from a managerial economy to a more entrepreneurial economy. One example given is the process for economies in Europe from a denial perspective of that the world is changing to attempts to cope with these changes. In their chapter they argue that it took long time before there was some reaction in the European society by the observed changes in the US. Instead many governments thought that the changes observed were specific for the US. According to the authors it is of vital importance to realise that the world is entering into a number of knowledge based economies. At least this will be the case for developed countries such as EU community and the US. In such a world comparative advantages are more based upon new knowledge than of cost structures. Audretsch and Thurik assume that one will have a shift in policy from preserving SMEs to given priority to start-ups and knowledge based SMEs. They also give some examples of such a
development by describing the so called SBIR system in the US, which also has been transformed to some European countries. This type of development is also much in line with an increasing interest in entrepreneurship and innovation policy; there innovation policy is partly shifting from concentrating on measures in the R&D area to more measures combining innovation and entrepreneurship behaviour which could be illustrated by the interest in innovative entrepreneurship. In such a society the issue of knowledge spill over is important. According to Audretsch and Thurik in the globalized economy, knowledge spill-over will become more common and of great importance due to new technology.

Bengt Johannisson has in his chapter combined the global economy with a local and regional perspective. Due to new technology and the importance of networks, also in a local area, he argues that one will see what he calls *glocalization*. There are number of factors of great importance in a local perspective such as those entrepreneurs always are rooted in a local environment e.g. in a life-setting perspective. At the same time for many entrepreneurs it has become much easier to have a global outlook for their business. In a global perspective there is a need of complex competence while in the local perspective entrepreneurs are more focused. And the global world involves both these perspectives for what Bengt Johannisson named as outlook, life-setting and competence. In a world which could be characterized as a *glocalized* economy some fundamental issues must be solved. First it is not obvious what type of measures that are of importance for policy-makers or on what levels such measures should be taken. One possibility being that policy measures mainly could be taken on international and local/regional levels. Increasing competence on regional levels will create new demands for such measures. There will also be a motive that some issues should be dealt with on an international level, e.g. EU level. In a world with increased competition demands for similar systems on different markets will be discussed which has been seen e.g. concerning rule simplification or tax related issues. A glocalized world could therefore be creating new thinking in the political system also questioning the importance of dominating national policy perspectives. Networking in a local environment will also put focus on cooperation between small and big business a factor which Audretsch and Thurik also have in their chapter.

The subject concerning small enterprise, large firms and growth is dealt with in William Baume’s chapter. First Baumol argues that
small and large firms have different roles in the innovation process. The small firms are the ones where one can expect breakthroughs in the process while in large firms one could expect more so called incremental innovations. Therefore, the different types of firms are specialized on different parts of the innovation process. Together they are of great importance and contribute more than each one of them could do separately. In this sense the relationships between small and large firms are of great importance. One could also see problems if small firms too soon are bought in the process by large firms with another role in the innovation process. The bureaucracy in large firms can prohibit a rapid development in small firms if these firms are owned by large firms.

Baumol also describes the importance of imitation which is a very common type of innovation. It is one method of transferring the knowledge from a breakthrough innovation to more firms. Besides the importance of firms the activities taken by governments and universities are also of importance in the innovation process. Some of possible policy measures to be taken according to Baumol are e.g. to stimulate immigration of foreign technicians and related personnel, study of measures taken of governments in other countries or establishments of observer staff in other countries. These are some examples describing that policy measures will be globalized.

Howard Aldrich has in his chapter taken a team perspective. Aldrich has in his research analyzed different type of teams and the need of competence building. He argues that certain social network structures are more likely than others to generate strong entrepreneurial teams. If so, one important issue would be for public authorities to facilitate such structures. It is in this perspective important to realise that then individuals are involved in entrepreneurial processes they are involved in a social psychological experience more than in a rational process in building competence skills and work experiences. A specific issue is that according to Aldrich if a team should be successful it is important to have a broad perspective looking for competence. He discusses the issue of strangers as such a component in team building. However, in the teams he was researching very few did report any stranger ties. Some suggestions from the research are that norms and competence could be promoted by e.g. the educational system or that new technology will make it possible to look beyond the immediate network. Aldrich also describes the importance of dynamics in the labour market,
public institutions should allow people to change jobs freely and easily. The globalization will affect how team-buildings will be done in the future and a proposition is that more teams must be built on competence to deal with an increasing competition.

Paul Reynolds describes the issue of export orientation among different type of entrepreneurs. His main interest is about export activities among new and small firms but also among so called nascent entrepreneurs. The data used is from different data sets of Global Entrepreneurship Monitor studies. The data set is covering in total 43 different countries. One main question is during what conditions new and small firms participate in international activities. Or to put it differently to what extent these firms are active in a global market. The answer seems to be that large countries have less export oriented new and small firms, probably due to large home markets. However, it is not obvious that population density will be a factor of importance for internationalisation or lack of internationalisation. Other factors that seem to be of importance are if the entrepreneur is male or has an education beyond secondary school. However, few new firms really have customers from abroad normally only one out of ten new firms is involved in such transactions.

Is the small firm still a category of analysis is the subject for Charles Sabel in his chapter. Sabel raises a number of important issues in the chapter, e.g. if it could be misleading to study small firms as a distinct category of enterprise or if they are best understood in the context they are working within. Sabel states that he personally thinks that one should have more emphasis on the relations between different type of firms and therefore the context. One development that according to Sabel could be seen is the vertical disintegration of large firms meaning that the relation with small firms instead is increasing. One area of research to realise this is within clusters or industrial districts. According to Sabel this is also an area of increasing interest in developing countries. Therefore, one could see policy measures taken for network building. In developing countries one could observe rapidly increases of the use of venture capital; examples given are Taiwan, Israel and Brazil. The integration effects between large and small firms and small and small firms could also be seen as an effect of the globalization ongoing in the world. If policy will be more about creating networks increasing integration between actors in e.g. industrial districts, these factors could be seen as a renewal of an industrial policy.
An increasing interest in developing countries is also a starting-point of departure in the chapter written by Elisabeth Gatewood and Sylvain Boko. Their interest is about entrepreneurial challenges and opportunities in the developing world. There is so far limited knowledge about the emerging and developing entrepreneurial world. Reviewing nine top journals over a 16 years period Gatewood and Boko only found around 40 articles dealing with this issue and most of them were about China or Russia. So according to Gatewood and Boko there are a great need of knowledge about what is ongoing in these countries. The countries are of course in very different situation according to e.g. the development of the economy. In the chapter the authors discuss the regulatory and institutional environment in which entrepreneurs have to be operating. Using statistics from the World Bank they analyse further three measures in this perspective, i.e. how difficult it is to start a business, the problem of dealing with licences and access to credit. In the chapter data in these dimensions for 12 countries are presented. One example given is that it will take up to 150 days to start a business in Democratic Republic of Congo or that one has to follow 15 procedures in the Philippines. They conclude that training, capacity building and availability of funding are fundamental in creating an entrepreneurial society in developing countries.

In the final chapter Zoltan Acs takes a different approach by presenting a geopolitical perspective. The basic discussion is that it is important to realise there the main economic forces will be in the future. Acs discusses the perspectives of Eurasia and its growing importance in the future and points out that Europe has a deficit of really big cities in the new Europe and that the only real powerful cities in Europe for the moment are Paris and London. The problem to discuss is then first to give the argument of the need of a third big city and then to present a place there it could be built. The main problem now is to integrate Europe with the increasing economies in Asia.

Acs also presents research of the importance of big cities around the world and that for the first time in history the majority of the people in the world lives in such a city. Concluding and looking to the geopolitical situation he finally argues that Europe and mainly the EU community should invest in building such a city. In essence in a similar way that China is doing. In the chapter Acs presents maps and possible locations for such a city and suggests that EU concentrate much of it regional support to such a project.
Concluding, the book consists of many perspectives on globalization and its effects on SMEs, innovation and entrepreneurship. Many of the chapters discuss the importance of new technology both for the very small firms but also for the integration effects between large and small firms. Integration could also be seen as a way to increase knowledge spill over there also the new technology will be of importance. Some authors also see differences in a future policy in this area, from a more concentrated upon preventing the failures of SMEs to more about investing in entrepreneurship and innovations in early phases. However, one could also see the opinion of more of a new form of industrial policy. There are also issues analyzed concerning more of a team building perspective and of the importance of clusters and industrial districts also in developing economies. And perhaps that Europe has to face a new economic order there many of the important business partners will be found in e.g. Asia. So this book is not giving one answer of what globalization will mean for SMEs, entrepreneurship and innovation but a number of possible roads to the future development in a more globalized world.
2. Globalization, entrepreneurship and the strategic management of regions

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2.1 Introduction

Perhaps one of the less-understood phenomena accompanying the increased globalization during the first decade of the 21st century has been a shift in the comparative advantage of high-wage countries towards knowledge-based economic activity. An important implication of this shift in this comparative advantage is that much of the production and commercialization of new economic knowledge is less associated with footloose multinational corporations and more associated with high-tech innovative regional clusters, such as Silicon Valley in California, the Cambridge area in the UK, and the Montpellier area in France. Only two decades ago the conventional wisdom predicted that globalization would render the demise of the region as a meaningful unit of economic analysis. Yet the obsession of policy-makers around the globe to “create the next Silicon Valley” reveals the increased importance of geographic proximity and regional agglomerations as well as of the role of SMEs and entrepreneurial activity. The purpose of this paper is to resolve the paradox of globalization by explaining the emergence of entrepreneurship and geographic localization as the two key organizational platforms because of and not in spite of a globalizing economy.

That globalization is one of the defining changes at the turn of the century is clear from a reading of the popular press. Like all grand concepts, a definition for globalization is elusive and elicits criticism.

¹ Acknowledgement: the authors would like to thank Linda Vreeswijk for recovering files, Haibo Zhou for research assistance and the participants of the Brussels meeting of the FSF International Council in 2008 for comments.
That domestic economies are globalizing is a cliché makes it no less true. In fact, the shift in economic activity from a local or national sphere to an international or global orientation ranks among the most vehement changes shaping the current economic landscape.

The driving force underlying the emerging globalization has been technology. While there are many different aspects to the technological revolution, the advent of the microprocessor combined with its application in telecommunications has altered the economic meanings of national borders and distance.

Observing the speed at virtually no cost with which information can be transmitted across geographic space via the Internet, cell phones, and electronic communication superhighways, The Economist proclaimed on its title page of an influential issue in the late 1990s, “The Death of Distance”. The new communications technologies have triggered a virtual spatial revolution in terms of the geography of production. According to The Economist, “The death of distance as a determinant of the cost of communications will probably be the single most important economic force shaping society in the first half of the next century”. What the telecommunications revolution has done is to reduce the cost of transmitting information across geographic space to virtually zero. At the same time, the microprocessor revolution has made it feasible for nearly everyone to participate in global communications.

There are many statistics about the increase of international trade and transactions. Inferences about the degree of and increase in globalization based on international trade statistics miss an important point – it is the quality and not just the quantity of international transactions that have changed. Interaction among individuals adds a very different quality to the more traditional measures of trade, foreign direct investment, and capital flows and also has very different implications for the development of economic activities. This additional quality contributed by the transnational interactions of individuals, and not just arm’s-length transactions by corporations, exposes people to ideas and experiences that were previously inaccessible.

Globalization would not have occurred to the degree that it has if the fundamental changes were restricted to the advent of the

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microprocessor and telecommunications. It took a political revolution in significant parts of the world to reap the full benefits from these technological changes. The political counterpart of the technological revolution was the increase in democracy and concomitant stability in areas of the world that had previously been inaccessible. The Cold War combined with internal political instability rendered potential investments in Eastern Europe and much of the developing world as risky and impractical. During the post-war era most trade and economic investment was generally confined to Europe and North America, and later a few of the Asian countries, principally Japan and the Asian Tigers. Trade with countries behind the iron curtain was restricted and in some cases prohibited. Even trade with Japan and other Asian countries was highly regulated and restricted. Similarly, investments in politically unstable countries in South America and the Mid-East resulted in episodes of national takeovers and confiscation where the foreign investors lost their investments. Such political instability rendered foreign direct investment outside of Europe and North America to be particularly risky and of limited value. In other words, the energy and focus devoted to maintain geopolitical balance was freed up to boost geo-economic growth.

The fall of the Berlin Wall and subsequent downfall of communism in Eastern Europe and the former Soviet Union was a catalyst for stability and accessibility to parts of the world that had previously been inaccessible for decades. Within just a few years it has become possible not just to trade with, but also to invest in countries such as Hungary, the Czech Republic, Poland, and Slovenia, as well as China, Vietnam, and Indonesia. For example, India became accessible as a trading and investment partner after opening its economy in the early 1990s. Trade and investment with the developed countries quickly blossomed, reflecting the rapid change in two dimensions. First, India was confronted with sudden changes in trade and investment, not to mention a paradigmatic shift in ways of doing business. Second, to the foreign partner, in this case the United States, taking advantage of opportunities in India also meant downward pressure on wages and even plant closings in the home country.

With the opening of some of these areas and participating in the world economy for the first time in decades, the post-war equilibrium came to a sudden end. This created the opportunities associated with gaping disequilibria. Consider the large differentials in labour costs. As long as the Berlin Wall stood, and countries such as China and Vietnam remained closed, large discrepancies in wage
rates could be maintained without eliciting responses in trade and foreign direct investment. The low wage rates in China or parts of the former Soviet Union neither invited foreign companies to build plants nor resulted in large-scale trade with the West based on access to low production costs. Investment by foreign companies was either prohibited by local governments or considered to be too risky by the companies. Similarly, trade and other restrictions limited the capabilities of firms in those countries from being able to produce and trade with Western nations.

The gaping wage differentials existing while the Wall stood and much of the communist world was cut off from the West were suddenly exposed in the early 1990s. There were not only unprecedented labour cost differentials but also massive and willing populations craving to join the high levels of consumption that had become the norm in Western Europe and North America. For example, in the early part of the 1990s, the daily earnings of labour were estimated to be $92.24 in the United States and $78.34 in the European Union. This was a sharp contrast shortly after the Berlin Wall fell and wages were only $6.14 in Poland and $6.45 in the Czech Republic. In Asia, the wage gap was even greater, where the daily earnings were $1.53 in China, $2.46 in India and $1.25 in Sri Lanka. The potential labour force in countries like China, with some 450 million workers, and India with some 350 million workers dwarfs the workforce in North America and Europe.

Of course, the productivity of labour is vastly greater in the West, which compensates to a significant degree for such large wage differentials. Still, given the magnitude of these numbers both trade and investment have responded to the opportunities made possible by the events of 1989.

While the most salient feature of globalization involves interaction and interfaces among individuals across national boundaries, the more traditional measures of transnational activity reflect an upward trend of global activities. These traditional measures include trade (exports and imports), foreign direct investment (inward and outward), international capital flows, and inter-country labour mobility. The overall trend for all of these measures has been strongly positive. The trade of goods nearly tripled already between 1985 and 1996. The trade of services increased by more than three times over this time period. The increases in investment income,

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3 The data are adopted from Jensen (1993).
direct investment and portfolio investment were even greater. But the increase in all of these measures within just over a decade reflects the increasing degree of globalization.

The degree of world trade, measured by exports and imports has increased over time. World exports increase from $1.3 trillion in 1970 to nearly $5 trillion in 1999 and to $12 trillion in 2006, in real terms (WTO, 2007). While some of this increase in the world export rate is attributable to an increased participation in international trade by countries that had previously been excluded, export rates in the leading industrialized countries have also increased over the past three decades. For example, US exports and imports have increased from 11 percent of GDP in 1970 to more than 25 percent by 1999 and to 23 percent in 2007 (CIA, 2007).

The increase in world trade is also not attributable to the influence of just a few industries or sectors, but rather systematic across most part of the economy. The exposure to foreign competition in manufacturing increased by about one-sixth in the OECD countries. The exposure to foreign competition increased in every single OECD country, with the exception of Japan. In addition, it increased in most of the manufacturing industries.

A different manifestation of globalization involves (inward) foreign direct investment, which has increased for all world countries from an average of 0.5 trillion dollars in the last decade of the last century to 1.5 trillion in 2006 in real terms. The increase in global FDI has also not been solely the result of a greater participation by countries previously excluded from the world economy. In the European Union (inward) FDI as a percentage of gross fixed capital formation increased from an average of 12% for the last decade of the last century to 18% in 2006. For the US these percentages stayed the same (7%), whereas for the UK it nearly doubled from 18% to 34%. The stock of FDI for all world countries as a percentage of gross domestic product increased from an average of 8% in the last decade of the last century to 25% in 2006 (UNCTAD, 2007). Trans-national private capital flows have also increased in the past two decades. For instance, total net capital flows to developing countries increased from an average of 120 billion US$ of 2006 in the period 1995-2000 to nearly 200 billion US$ in 2007 (IMF, 2007).
2.2 The regional response

Confronted with lower cost competition in foreign locations, producers in the high-cost countries have four options apart from doing nothing and losing global market share: (1) reduce wages and other production costs sufficiently to compete with the low-cost foreign producers, (2) substitute equipment and technology for labour to increase productivity, (3) shift production out of the high-cost location and into the low-cost location and (4) formulate a strategy away from using traditional inputs like land, labour and capital and toward knowledge.

It is generally believed that the United States has been much quicker to absorb the consequences of globalized production than Europe based upon the different growth rates of the United States when compared to European nations over the last twenty years. Indeed, the European countries have been relatively slow to move from the managed economy to the entrepreneurial economy (Audretsch and Thurik, 2001 and 2004). Clearly, the European response varied across countries. Nevertheless, by and large five distinct stages can be discerned of the evolution of the European stance towards the entrepreneurial economy (Audretsch, Thurik, Verheul and Wennekers, 2002, p. 4-6).

The first stage was denial. During the 1980s and early 1990s, European policy makers looked to Silicon Valley with disbelief. Europe was used to facing a competitive threat from the large well-known multinational American corporations; not from nameless and unrecognizable start-up firms in exotic industries such as software and biotechnology. Twenty years ago the emerging firms such as Apple Computer and Intel were interesting but were irrelevant competitors in the automobile, textile, machinery and chemical industries; then the obvious engines of European competitiveness.

The second stage, during the mid-1990s, was recognition. Europe recognized that the entrepreneurial economy in Silicon Valley delivered a sustainable long-run performance. But it held to its traditional products while embracing the theory of comparative advantage and channelling resources into traditional moderate technology industries. During this phase Europe’s most important economy, Germany, would provide the automobiles, textiles and machine tools. The entrepreneurial economy of Silicon Valley, Route
128 and the Research Triangle would produce the software and microprocessors. Each continent would specialize in its comparative advantage and then trade with each other.

The third stage, during the second half of the 1990s, was envy. As Europe’s growth stagnated and unemployment soared, the capacity of the American entrepreneurial economy to generate both jobs and higher wages became the object of envy. The United States and Europe adhered to different doctrines: as the entrepreneurial economy diffused across the United States, European policy makers, particularly in large countries such as Germany and France, despaired that European traditions and values were simply inconsistent and incompatible with the entrepreneurial economy. They should have concluded that the concept of comparative advantage had yielded to the different, but better, concept of dynamic competitive advantage.

The fourth stage, during the last years of the twentieth century, was consensus. European policy makers reached a consensus that – in the terminology of Audretsch and Thurik (2001 and 2004) – the new entrepreneurial economy was superior to the old managed economy and that a commitment had to be forged to creating a new entrepreneurial economy. A broad set of policies were instituted to create a new entrepreneurial economy. European policy makers looked across the Atlantic and realized that if places such as North Carolina, Austin, and Salt Lake City could implement targeted policies to create the entrepreneurial economy, European cities and regions could as well. After all, Europe had a number of advantages and traditions, such as a highly educated and skilled labour force, world-class research institutions and its variety in cultures and hence innovative approaches to new products and organizations. These phenomena would provide a perfect framework for absorbing the high levels of uncertainty inherent to the entrepreneurial economy (Audretsch and Thurik, 2001).

The fifth stage is attainment. The entrepreneurial economy is finally emerging in Europe. Consider the Green Paper on Entrepreneurship of the European Commission (European Commission, 2003) which aims to stimulate debate amongst policy makers, businesses, representative organizations, journalists and scientific experts on how to shape entrepreneurship policy. It analyses a range of policy options and asks, within the proposed context for entrepreneurship policy, a number of questions suggesting different options on how to reach progress. See Audretsch, Thurik, Verheul and Wennekers
(2002) for further information on the five stages and some country studies on the determinants of entrepreneurship.

Many of the European and American firms that have successfully restructured resorted to alternatives (2) and (3). Substituting capital and technology for labour, along with shifting production to lower-cost locations has resulted in waves of Corporate Downsizing throughout Europe and North America. At the same time, it has generally preserved the viability of many of the large corporations (Audretsch and Thurik, 1999). As record levels of both European and American stock indexes indicate, the companies have not generally suffered. For example, already between 1979 and 1995 more than 43 million jobs were lost in the United States as a result of corporate downsizing. This includes 25 million blue-collar jobs and 18 million white-collar jobs. Similarly, the 500 largest US manufacturing corporations cut nearly five million jobs between 1980 and 1993, or one-quarter of their work force. Perhaps most disconcerting, the rate of corporate downsizing has apparently increased over time in the United States, even as the unemployment rate has fallen. During most of the 1980s, about one in 25 workers lost a job. In the 1990s this has risen to one in 20 workers.

Although at its most intense in the late 1980s and early 1990s, this wave of corporate downsizing has continued (Burke and Cooper, 2000). The cries of betrayal and lack of social conscience on the part of the large corporations have died in the 21st century because the virtues of the new entrepreneurial economy become clear but they were ubiquitous in the last century. It is a mistake to blame the corporations for this wave of downsizing that has triggered massive job losses and rising unemployment in so many countries. These corporations are simply trying to survive in an economy of global competitors who have access to lower cost inputs.

Much of the policy debate responding to the twin forces of the telecommunications revolution and increased globalization has revolved around a trade-off between maintaining higher wages but suffering greater unemployment versus higher levels of employment but at the cost of lower wages rates. There is, however, an alternative.

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6 The disadvantages of downsizing have also been documented. See Dougherty and Bowman, 1995.
7 As the German newspaper, Die Zeit (2 February, 1996, p.1) pointed out in a front page article, “When Profits Lead to Ruin-More Profits and More Unemployment: Where is the Social Responsibility of the Firms?” the German public has responded to the recent waves of corporate downsizing with accusations that corporate Germany is no longer fulfilling its share of the social contract.
It does not require sacrificing wages to create new jobs, nor does it require fewer jobs to maintain wage levels and the social safety net. This alternative involves shifting economic activity out of the traditional industries where the high-cost counties of Europe and North America have lost the comparative advantage and into those industries where the comparative advantage is compatible with both high wages and high levels of employment – knowledge-based economic activity (Audretsch and Thurik, 1999). This shift is one of the reasons why entrepreneurship starts playing a vital role and the modern economy is often described as the entrepreneurial economy.

Globalization has rendered the comparative advantage in traditional moderate technology industries incompatible with high wage levels. At the same time, the emerging comparative advantage that is compatible with high wage levels is based on innovative activity. For example, employment has increased by 15 percent in Silicon Valley between 1992 and 1996, even though the mean income is 50 percent greater than in the rest of the country.8

Thus, the regional response to globalization has been the emergence of strategic management policy – not for firms, but for regions. As long as corporations were inextricably linked to their regional location by substantial sunk costs, such as capital investment, the competitiveness of a region was identical to the competitiveness of the corporations located in that region. A quarter-century ago, while the proclamation, “What is good for General Motors is good for America” may have been controversial, few would have disagreed that “What is good for General Motors is good for Detroit”. And so it was with US Steel in Pittsburgh and Volkswagen in Wolfsburg. As long as the corporation thrived, so would the region.

As globalization has rendered not only the degree to which the traditional economic factors of capital and labour are sunk, but also shifted the comparative advantage in the high-wage countries of North America and Europe toward knowledge-based economic activity, corporations have been forced to shift production to lower-cost locations. This has led to a delinking between the competitiveness of firms and regions. The advent of the strategic management of regions has been a response to the realization that the strategic management of corporations includes a policy option not available to regions – changing the production Standort.

At the heart of the strategic management of regions has been the development and enhancement of factors of production that cannot be transferred across geographic space at low cost – principally, although not exclusively, knowledge and ideas.

That knowledge spills over is barely disputed. While disputing the importance of knowledge externalities in explaining the geographic concentration of economic activity, Krugman (1991) and others do not question the existence or importance of such knowledge spillovers. In fact, they argue that such knowledge externalities are so important and forceful that there is no compelling reason for a geographic boundary to limit the spatial extent of the spillover. According to this line of thinking, the concern is not that knowledge does not spill over but that it should stop spilling over just because it hits a geographic border, such as a city limit, state line, or national boundary. As illustrated more than a decade ago by the title page of The Economist proclaiming “The Death of Distance,” the claim that geographic location is important to the process linking knowledge spillovers to innovative activity in a world of e-mail, cell phones, fax machines, and cyberspace may seem surprising and even paradoxical. The resolution to the paradox posed by the localization of knowledge spillovers in an era where the telecommunications revolution has drastically reduced the cost of communication lies in a distinction between knowledge and information. Information, such as the price of gold on the New York Stock Exchange, or the value of the Yen in London, can be easily codified and has a singular meaning and interpretation. By contrast, knowledge is vague, difficult to codify, and often only serendipitously recognized (Audretsch, Houweling and Thurik, 2000). While the marginal cost of transmitting information across geographic space has been rendered invariant by the telecommunications revolution, the marginal cost of transmitting knowledge, and especially tacit knowledge, rises with distance.

Von Hippel (1994) demonstrates that high-context, uncertain knowledge, or what he terms a “sticky” knowledge, is best transmitted via face-to-face interaction and through frequent and repeated contact. Geographic proximity matters in transmitting knowledge, because as Kenneth Arrow (1962) pointed out nearly half a century ago, such tacit knowledge is inherently non-rival in nature, and knowledge developed for any particular application can easily spill over and have economic value in very different applications.

As Glaeser, Kallal, Scheinkman, and Shleifer (1992: p. 1126) have observed, “Intellectual breakthroughs must cross hallways and streets more easily than oceans and continents”.

The importance of local proximity for the transmission of knowledge spillovers has been observed in many different contexts. It has been pointed out that, “business is a social activity, and you have to be where important work is taking place”.10 See Audretsch (1998), Feldman (1994), Jacobs (1969, Saxenian (1990) and Venables (1996) for some of these contexts.

Not only does Krugman (1991: p. 53) doubt that knowledge spillovers are not geographically constrained but he also argues that they are impossible to measure because “knowledge flows are invisible, they leave no paper trail by which they may be measured and tracked”. However, an emerging literature (Jaffe, Trajtenberg, and Henderson 1993) has overcome data constraints to measure the extent of knowledge spillovers and link them to the geography of innovative activity. Jaffe (1989), Feldman (1994), and Audretsch and Feldman (1996) modified the model of the knowledge production function to include an explicit specification for both the spatial and product dimensions:

\[ I_{st} = IRD^{\beta_1} \cdot (UR_{st})^{\beta_2} \cdot UR_{st} \cdot (GC_{st})^{\beta_3} \cdot \varepsilon_{st} \]

where \( I \) is innovative output, \( IRD \) is private corporate expenditures on R&D, \( UR \) is the research expenditures undertaken at universities, and \( GC \) measures the geographic coincidence between university and corporate research. The unit of observation for estimation is at the spatial level, \( s \), a state, and industry level, \( i \). Jaffe (1989) used the number of inventions registered with the United States patent office as a measure of innovative activity. By contrast, Audretsch and Feldman (1996) and Acs, Audretsch, and Feldman (1994) developed a direct measure of innovative output consisting of new product introductions.

Estimation of equation (1) essentially shifts the model of the knowledge production function from the unit of observation of a firm to that of a geographic unit. The consistent empirical evidence that \( \beta_1 \geq 0, \beta_2 \geq 0, \beta_3 \geq 0 \) supports the notion that knowledge spills over for third-party use from university research laboratories as well as industry R&D laboratories. This empirical evidence suggests that location and proximity clearly matter in exploiting knowledge spillovers. Not only have Jaffe, Trajtenberg, and Henderson (1993)

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found that patent citations tend to occur more frequently within the state in which they were patented than outside of that state, but Audretsch and Feldman (1996) found that the propensity of innovative activity to cluster geographically tends to be greater in industries where new economic knowledge plays a more important role. Prevenzer (1997) and Zucker, Darby, and Armstrong (1998) show that in biotechnology, which is an industry based almost exclusively on new knowledge, the firms tend to cluster together in just a handful of locations. This finding is supported by Audretsch and Stephan (1996) who examine the geographic relationships of scientists working with biotechnology firms. The importance of geographic proximity is clearly shaped by the role played by the scientist. The scientist is more likely to be located in the same region as the firm when the relationship involves the transfer of new economic knowledge. However, when the scientist is providing a service to the company that does not involve knowledge transfer, local proximity becomes much less important.

There is reason to believe that knowledge spillovers are not homogeneous across firms. In estimating Equation (1) for large and small enterprises separately, Acs, Audretsch, and Feldman (1994) provide some insight into the puzzle posed by the recent wave of studies identifying vigorous innovative activity emanating from small firms in certain industries. How are these small, and frequently new, firms able to generate innovative output while undertaking generally negligible amounts of investment into knowledge generating inputs, such as R&D? The answer appears to be through exploiting knowledge created by expenditures on research in universities and on R&D in large corporations. Their findings suggest that the innovative output of all firms rises along with an increase in the amount of R&D inputs, both in private corporations as well as in university laboratories. However, R&D expenditures made by private companies play a particularly important role in providing knowledge inputs to the innovative activity of large firms, while expenditures on research made by universities serve as an especially key input for generating innovative activity in small enterprises. Apparently, large firms are more adept at exploiting knowledge created in their own laboratories, while their smaller counterparts have a comparative advantage at exploiting spillovers from university laboratories.

A conceptual problem arises with economies accruing to the knowledge transmission associated with agglomeration. Once a city, region, or state develops a viable cluster of production and
innovative activity why should it ever lose the first-mover advantage? One answer, provided by Audretsch and Feldman (1996) is that the relative importance of local proximity and therefore agglomeration effects is shaped by the stage of the industry lifecycle. A growing literature suggests that who innovates and how much innovative activity is undertaken is closely linked to the phase of the industry lifecycle (Klepper 1996). Audretsch and Feldman (1996) argue that an additional key aspect to the evolution of innovative activity over the industry lifecycle is where that innovative activity takes place. The theory of knowledge spillovers, derived from the knowledge production function, suggests that the propensity for innovative activity to cluster spatially will be the greatest in industries where tacit knowledge plays an important role. As argued above, it is tacit knowledge, as opposed to information that can only be transmitted informally, and typically demands direct, trustful and repeated contact. The role of tacit knowledge in generating innovative activity is presumably the greatest during the early stages of the industry lifecycle, before product standards have been established and a dominant design has emerged. Audretsch and Feldman (1996) classify 210 industries into four different stages of the lifecycle. The results proved considerable evidence suggesting that the propensity for innovative activity to spatially cluster is shaped by the stage of the industry lifecycle. On the one hand, new economic knowledge embodied in skilled workers tends to raise the propensity for innovative activity to cluster spatially throughout all phases of the industry lifecycle. On the other hand, certain other sources of new economic knowledge, such as university research, tend to elevate the propensity for innovative activity to cluster during the introduction stage of the lifecycle, but not during the growth stage, and then again during the stage of decline.

Perhaps most striking is the finding that greater geographic concentration of production actually leads to more, and not less, dispersion of innovative activity. Apparently, innovative activity is promoted by knowledge spillovers that occur within a distinct geographic region, particularly in the early stages of the industry lifecycle, but as the industry evolves toward maturity and decline, may be dispersed by additional increases in concentration of production that have been built up within that same region. The evidence suggests that what may serve as an agglomerating influence in triggering innovative activity to spatially cluster during the introduction and growth stages of the industry lifecycle, may
later result in a congestion effect, leading to greater dispersion in innovative activity. While the literature on economic geography has traditionally focused on factors such as rents, commuting time, and pollution as constituting congestion and dissipating agglomeration economies (Henderson 1986), this type of congestion refers to lock-in with respect to new ideas. While there may have been agglomeration economies in automobiles in Detroit in the 1970 and computers in the Northeast Corridor in the 1980s, a type of intellectual lock-in made it difficult for Detroit to shift out of large-car production and for IBM and DEC to shift out of mainframe computers and into mini-computers. Perhaps it was this type of intellectual congestion that led to the emergence of the personal computer in California, about as far away from the geographic agglomeration of the mainframe computer as is feasible on the mainland of the United States. Even when IBM developed its own personal computer, the company located its fledgling PC facility in Boca Raton, Florida, way outside of the mainframe agglomeration, in the Northeast Corridor. Thus, there is at least some evidence suggesting that spatial agglomerations, just as other organizational units of economic activity are vulnerable to technological lock-in, with the result being in certain circumstances that new ideas need new space.

2.3 The knowledge production function and the emergence of entrepreneurship

That SMEs would emerge as becoming more important seems to be contrary to many of the conventional theories of innovation. The starting point for most theories of innovation is the firm. In such theories the firms are exogenous and their performance in generating technological change is endogenous (Arrow 1962). For example, in the most prevalent model found in the literature of technological change, the model of the knowledge production function, formalized by Zvi Griliches (1979), firms exist exogenously and then engage in the pursuit of new economic knowledge as an input into the process of generating innovative activity. The most decisive input in the knowledge production function is new economic knowledge. Knowledge as an input in a production function is inherently
different than the more traditional inputs of labour, capital, and land. While the economic value of the traditional inputs is relatively certain, knowledge is intrinsically uncertain and its potential value is asymmetric across economic agents.\(^{11}\) The most important, although not the only source of new knowledge is considered to be research and development (R&D). Other key factors generating new economic knowledge include a high degree of human capital, a skilled labour force, and a high presence of scientists and engineers.

There is considerable empirical evidence supporting the model of the knowledge production function. This empirical link between knowledge inputs and innovative output apparently becomes stronger as the unit of observation becomes increasingly aggregated. For example, at the unit of observation of countries, the relationship between R&D and patents is very strong. The most innovative countries, such as the United States, Japan, and Germany, also tend to undertake high investments in R&D. By contrast, little patent activity is associated with developing countries, which have very low R&D expenditures. Similarly, the link between R&D and innovative output, measured in terms of either patents or new product innovations is also very strong when the unit of observation is the industry. The most innovative industries, such as computers, instruments, and pharmaceuticals also tend to be the most R&D intensive. Audretsch (1995) finds a simple correlation coefficient of 0.74 between R&D inputs and innovative output at the level of four-digit standard industrial classification (SIC) industries. However, when the knowledge production function is tested for the unit of observation of the firm, the link between knowledge inputs and innovative output becomes weakly positive in some studies and even non-existent or negative in other. The model of the knowledge production function becomes particularly weak when small firms are included in the sample. This is not surprising, since formal R&D is concentrated among the largest corporations, but a series of studies (Acs and Audretsch 1988) has clearly documented that small firms account for a disproportional share of new product innovations given their low R&D expenditures.

The breakdown of the knowledge production function at the level of the firm raises the question, *Where do innovative firms with little or no R&D get the knowledge inputs?* This question becomes particularly

\(^{11}\) Arrow (1962) pointed out this is one of the reasons for inherent market failure. See also Audretsch, Houweling and Thurik (2000).
relevant for small and new firms that undertake little R&D themselves, yet contribute considerable innovative activity in newly emerging industries such as biotechnology and computer software (Audretsch 1995). One answer that has emerged in the economics literature is from other, third-party firms or research institutions, such as universities: economic knowledge may spill over from the firm conducting the R&D or the research laboratory of a university.

Why should knowledge spill over from the source of origin? At least two major channels or mechanisms for knowledge spillovers have been identified in the literature. Both of these spillover mechanisms revolve around the issue of appropriability of new knowledge. First, Cohen and Levinthal (1989) suggest that existing firms develop the capacity to adapt new technology and ideas developed in other firms and are therefore able to appropriate some of the returns accruing to investments in new knowledge made externally.

Second, Audretsch (1995) proposes shifting the unit of observation away from exogenously assumed firms to individuals, such as scientists, engineers, or other knowledge workers – agents with endowments of new economic knowledge. When the lens is shifted away from the firm to the individual as the relevant unit of observation, the appropriability issue remains, but the question becomes: How can economic agents with a given endowment of new knowledge best appropriate the returns from that knowledge? If the scientist or engineer can pursue the new idea within the organizational structure of the firm developing the knowledge and appropriate roughly the expected value of that knowledge, he has no reason to leave the firm. On the other hand, if he places a greater value on his ideas than do the decision-making bureaucracy of the incumbent firm, he may choose to start a new firm to appropriate the value of his knowledge. In the metaphor provided by Albert O. Hirschman (1970), if voice proves to be ineffective within incumbent organizations, and loyalty is sufficiently weak, a knowledge worker may resort to exit the firm or university where the knowledge was created in order to form a new company. In this spillover channel the knowledge production function is actually reversed. The knowledge is exogenous and embodied in a worker. The firm is created endogenously in the worker’s effort to appropriate the value of his knowledge through innovative activity.

What emerges from the new evolutionary theories and empirical evidence on innovation as a competitive strategy deployed by SMEs is that markets are in motion, with many new firms entering
the industry and many existing firms exiting. But is this motion horizontal, in that the bulk of firms exiting are comprised of firms that had entered relatively recently, or vertical, in that a significant share of the exiting firms had been established incumbents that were displaced by younger firms? In trying to shed some light on this question, Audretsch (1995) proposes two different models of the evolutionary process of industries over time. Some industries can be best characterized by the model of the conical revolving door, where new businesses are started, but there is also a high propensity to subsequently exit from the market. Other industries may be better characterized by the metaphor of the forest, where incumbent establishments are displaced by new entrants. Which view is more applicable apparently depends on three major factors – the technological conditions, scale economies, and demand (Audretsch, 1995, p 171).

When SMEs deploy a strategy of innovation, they typically start at a very small scale of output. They are motivated by the desire to appropriate the expected value of new economic knowledge. But, depending upon the extent of scale economies in the industry, the firm may not be able to remain viable indefinitely at its start up size. Rather, if scale economies are anything other than negligible, the new firm is likely to have to grow to survive. The temporary survival of new firms is presumable supported through the deployment of a strategy of compensating factor differentials that enable the firm to discover whether or not it has a viable product (Audretsch, van Leeuwen, Menkveld and Thurik, 2001).

The empirical evidence has found that the post-entry growth of firms that survive tends to be spurred by the extent to which there is a gap between the MES level of output and the size of the firm. However, the likelihood of any particular new firm surviving tends to decrease as this gap increases. Such new SMEs deploying a strategy of innovation to attain competitiveness are apparently engaged in the selection process. Only those SMEs offering a viable product that can be produced efficiently will grow and ultimately approach or attain the MES level of output. The remainder will stagnate, and depending upon the severity of the other selection mechanism – the extent of scale economies – may ultimately be forced to exit out of the industry. Thus, in highly innovative industries, there is a continuing process of the entry of new SMEs into industries and not necessarily the permanence of individual SMEs over the long run. Although the skewed size distribution of firms persists with remarkable stability
over long periods of time, a constant set of SMEs does not appear to be responsible for this skewed distribution. Rather, by serving as agents of change, SMEs provide an essential source of new ideas and experimentation that otherwise would remain untapped in the economy.

2.4 Entrepreneurship in the globalized economy

Above we explained how globalization has ushered in an increased role for the entrepreneurial organization as well as an increased importance of geographic location. The emergence of entrepreneurship is due to the shift towards knowledge intensive industries where SMEs play an increasing role in the modern knowledge production function as a conduit of knowledge spillovers and the evolution of industries as learning mechanism serving as agents of change. This suggests that the process of taking knowledge created in an incumbent organization that might otherwise have remained unused and dormant, and using that knowledge to launch a new enterprise, entrepreneurship serves as an important mechanism for the spillover of knowledge.

In addition, changes in technology may have shifted the competitive advantage away from larger scale organizations to smaller scale organizations. In particular, the advent of the ICT revolution directly favoured SMEs and entrepreneurship (Nooteboom, 1999 and 2000).

Any economic regime switch based upon a radical new technology is accompanied by the arrival of numerous small firms. There are two reasons. First, since a new technology creates new markets by definition, it destroys incumbent market positions and the entry barriers typical for the older technology and its market. Hence, entry is made easy. Secondly, in the early stages of new markets price elasticity is low because of the novelty of the product. The small firm of the typical entrant has no disadvantage because there is no competitive pressure to fight the battle of scale economies.

The specific nature of ICT driven regime switch leads to two more reasons why the competitive advantages of large firms decreases First, ICT tools and the practically free access to Internet created a world
wide platform for relations between firms irrespective of their size. Small firms in particular need these relationships to compensate for their narrow set of competencies. The second has to do with the scale effects in transaction costs (Nooteboom, 1993) when firms engage in deals, try to do so or want to monitor them. Transaction costs are higher for small firms when compared to large firms. This has to do with the fixed costs involved with setting up information systems for search, evaluation, control and enforcement. These fixed costs consist of necessary hardware, software and mastering their use. The arrival of the ICT tools which are generally cheap, small and easy to use together with the practically free access to the Internet has almost eliminated the fixed cost part in the transaction costs of any deal.

In the newer knowledge intensive economy there is more need for the exploration side of doing business as well as the software side. A well-known conflict in the strategic renewal of firms is whether to engage in product or process innovation. This difficult choice between the exploration and the exploitation emphasis is made easier because, as we explained above, Western firms hardly have a competitive advantage when it comes to exploiting scale economies by fine tuning the production process. This fine tuning is a process of extreme focus eliminating every redundant part in the production process using division of labour and mechanized tasks and the smooth interplay of the labour and machines involved. Once an optimum given a certain product is reached little prevents the forces of the globalized world to move this optimum to wherever labour costs are lowest. Exploration is an entirely different activity requiring openness, flexibility and experimentation instead of focus and elimination. It thrives in environments where variety and cooperation can be made useful to break the knowledge filter. These are typically 'industrial district' like and 'open source' oriented environments with many small firms and much turbulence. An additional effect is removal of one of the major scale effects in the exploitation stage of the product life cycle: easy to use and cheap ICT tools in part destroy the fruits of large scale. Scale effects in distribution are threatened by the above mentioned drop in the fixed part of the transaction costs. Remains the reputation effect which indeed protects many Western businesses, for instance in the fashion or life style industries. Another cause of the decreased importance of the exploitation stage of the product life cycle is the increased wealth of the global consumer. She can afford to behave
whimsically and individualistically so that the exploitation period of any given product decreases when compared to the exploration stage. Finally, the discrimination between the exploitation and exploration sides of doing business decreases. This is the world of prototypes, beta versions, simulations etc. This merger between the exploitation and exploration stages is necessary because of demand pressures but also made possible by the introduction of numerical controlled machines, i.e., robots (Acs, Audretsch and Carlsson, 1991). Computer aided design facilitates vertical cooperation and the speed with which products can be brought to the market.

The fine tuning of the production process involves both software and hardware. Software involves labour and knowledge while hardware includes physical capital. In the knowledge intense economy the bottleneck is software rather than hardware since globalization together with the whimsical and individualistic consumer makes investments in inflexible hardware dangerous. Rejuvenation of labour by training or replacement and improvement of knowledge by joining loose networks of businesses or cooperation with research institutes is easier than rebuilding factories and plants. By and large, the shape of factories in the service industry differs from that in manufacturing where investments in hardware are closely connected to a specific product. In the services hardware takes the shape of buildings and offices which can be used for different and changing portfolios of software, i.e., of labour and knowledge. This is one of the reasons why Western countries have not lost their competitive advantage in the service industries. The higher orientation towards software creates more room for SMEs in many industries.

Traditionally, ‘leakage’ is the most important impediment for businesses to cooperate. Leakage is the unwanted spillover of knowledge or competencies which is detrimental to the specific capabilities of a firm. A firm’s competitive position can be negatively effected by leakage if the knowledge or competencies spill over beyond the boundaries of a specific cooperative effort and its partners towards potential competitors. Of course, a solution is the contracting and maintenance of exclusivity. This again has several disadvantages. First, many modern forms of cooperation have ill defined goals and means by definition since they aim for novelty. Second, the transaction costs involved in setting up, monitoring and enforcing exclusivity contracts can be high because of their complexity and uncertainty. Lastly, exclusivity contracts limit the spontaneity of the process of learning which is essential in
the process of joint learning. ‘Leakage’ is less of a problem in the globalized economy with its fast changing consumer tastes and its fast changing technological opportunities. First, these fast changes limit the time for competitors to absorb the potential fruits of a third party cooperative effort. By the time it understands, imitates, implements and commercializes the original cooperative efforts already works on further developments and improvements. Second, as described above, more and more competitive advantage is the potential to combine processes of exploitation and exploration. This combination is a way rejuvenation which is deeply engrained in a firm’s organizational culture and cannot be easily imitated. In short, an essential part of the competitive advantage of modern firms is their ability to bring about change in products and technology and less to understand the virtues of existing products and technologies. Protection of what already exits as well as ‘leakage’ of its deeper characteristics has become less important. This protection was more difficult for SMEs.

So, there are many avenues by which the ICT revolution stimulated the competitive advantages of SMEs and generated new emphasis upon the role of entrepreneurship. These avenues go beyond the effects of globalization which urged modern economies to shift towards knowledge intensive activities. The increased emphasis on SMEs and entrepreneurship leads to a shift in policy focus towards their individual promotion as well as their collective support on the ‘industrial district’ level.

2.5 Conclusions

Globalization is shifting the comparative advantage in the OECD countries away from being based on traditional inputs of production, such as land, labour, and capital, toward knowledge. As the comparative advantage has become increasingly based on new knowledge, public policy has responded in two fundamental ways. The first has been to shift the policy focus away from the traditional triad of policy instruments essentially constraining the freedom of firms to contract-regulation, competition policy, or antitrust in the US, and public ownership of business. The policy approach of
constraint was sensible as long as the major issue was how to restrain large corporations in possession of considerable market power. That this policy is less relevant in a global economy is reflected by the waves of deregulation and privatization throughout the OECD. Instead, a new policy approach is emerging which focuses on enabling the creation and commercialization of knowledge. Examples of such policies include encouraging R&D, venture capital, and new-firm start-ups'. Probably the greatest and most salient shift in SME policy over the last two decades has been a shift from trying to preserve SMEs that are confronted with a cost disadvantage due to size inherent scale disadvantages, toward promoting the start up and viability of SMEs involved in the commercialization of knowledge, or knowledge-based SMEs.

For example, the United States Congress enacted the Small Business Innovation Research (SBIR) program in the early 1980s as a response to the loss of American competitiveness in global markets. Congress mandated each federal agency with allocating around 4 percent of its annual budget to funding innovative small firms as a mechanism for restoring American international competitiveness. The SBIR provides a mandate to the major R&D agencies in the United States to allocate a share of the research budget to innovative small firms. The SBIR consists of three phases. Phase I is oriented toward determining the scientific and technical merit along with the feasibility of a proposed research idea. A Phase I award provides an opportunity for a small business to establish the feasibility and technical merit of a proposed innovation. Phase II extends the technological idea and emphasizes commercialization. A Phase II award is granted to only the most promising of the Phase I projects based on scientific/technical merit, the expected value to the funding agency, company capability, and commercial potential. Approximately 40 percent of the Phase I awards continue on to Phase II. Phase III involves additional private funding for the commercial application of a technology. A Phase III award is for the infusion and use of a product into the commercial market. Private sector investment, in various forms, is typically present in Phase III.

At the turn of the century SBIR represents about 60 percent of all public SME finance programs while the public SME finance is about two-thirds as large as private venture capital. Equally as important, the emphasis on SBIR and most public funds is on early stage finance, which is generally ignored by private venture capital. Some of the most innovative American companies received early stage
finance from SBIR, including Apple Computer, Chiron, Compaq, and Intel. Lastly both the National Institute of Health (NIH) and the United States Department of Defence use the SBIR program to fund medical and biopharmaceutical research and biotechnology firms, respectively.

The benefits of the SBIR extend beyond the impact on the individual recipient firm. The social rate of return, which incorporates this external positive impact, exceeds the positive rate of return. There was no evidence of a negative rate of return associated with the SBIR. There is compelling evidence that the SBIR program has had a positive impact on developing the US biotechnology industry. The benefits have been documented as (Wessner, 2007):

- The survival and growth rates of SBIR recipients have exceeded those of firms not receiving SBIR funding.
- The SBIR induces scientists involved in biomedical research to change their career paths. By applying the scientific knowledge to commercialization, these scientists shift their career trajectories away from basic research toward entrepreneurship.
- The SBIR awards provide a source of funding for scientists to launch startup firms that otherwise would not have had access to alternative sources of funding.
- SBIR awards have a powerful demonstration effect. Scientists commercializing research results by starting companies induce colleagues to consider applications and the commercial potential of their own research.

The second fundamental shift involves the locus of such enabling policies, which are increasingly at ever lower levels of special aggregation. The downsizing of federal agencies charged with the regulation of business in many of the OECD countries has been interpreted by many scholars as the eclipse of government intervention. But to interpret deregulation, privatization, and the increased irrelevance of competition policies as the end of government intervention in business ignores an important shift in the locus and target of public policy. The last decade has seen the emergence of a broad spectrum of enabling policy initiatives that fall outside of the jurisdiction of the traditional regulatory agencies,
Sternberg (1996) documents how the success of a number of different high-technology clusters spanning a number of developed countries is the direct result of enabling policies, such as the provision of venture capital or research support. For example, the Advanced Research Program in Texas has provided support for basic research and the strengthening of the infrastructure of the University of Texas, which has played a central role in developing a high-technology cluster around Austin (Feller 1997). The Thomas Edison Centers in Ohio, the Advanced Technology Centers in New Jersey, and the Centers for Advanced Technology at Case Western Reserve University, Rutgers University, and the University of Rochester have supported generic, precompetitive research. This support has generally provided diversified technology development involving a mix of activities encompassing a broad spectrum of industrial collaborators.

One of the most interesting examples of the strategic management of regions involves the establishment of five EXIST regions in Germany, where start-ups' from universities and government research laboratories are encouraged (Audretsch, 2004). The program has the explicit goals of (1) creating an entrepreneurial culture, (2) the commercialization of scientific knowledge, and (3) increasing the number of innovative start-ups and SMEs. Five regions were selected among many applicants for START funding. These are the (1) Rhein-Ruhr region (bizeps program), (2) Dresden (Dresden exists), (3) Thueringen (GETUP), (4) Karlsruhe (KEIM), and (5) Stuttgart (PUSH!).

These programs promoting entrepreneurship in a regional context are typical of the strategic management of regions. While these regional policies are clearly evolving, they are clearly gaining in importance and impact in the overall portfolio of economic policy instruments.
2.6 References


3. Glocalization as a Generic Entrepreneurial Strategy

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3.1 Looking behind and beyond Globalization

Nobody would deny that we today live in a globalized world. Our digitalized living daily revises our worldwide mindmaps. Thanks to free trade and travel our material and social worlds have become global as well. This radical sociocultural change has since the last decade been preached all over the world with public institutions and business-interest organizations as megaphones. Since those carrying the globalization message mainly represent nations or super-nations such as the EU, the viewpoints of lower-level actors such as regions, localities, firms and individual citizens have seldom been considered. Paternalistically (super-)national bodies have instructed its subjects, not the least the many small firms that populate the (private) economy, what action to take. The basic message is: submit to the global forces – local is not beautiful any longer.

In a world where corporate forces and their assistant technology-driven regime rule a top-down, hierarchical perspective is only to be expected. Since these originate in metropolitan areas with a cosmopolitan life-style, concern for the cultural embedding of business and everyday life in regional and local contexts are becoming increasingly neglected as globalization proceeds. This does not mean that entrepreneurs and citizens have remained passive. If anything, economic and social experimentation beyond boundaries have increased. When the countries in former Eastern Europe opened their borders many small Swedish firms recognized the emerging business opportunities and established a supportive subcontractor system there. Reflecting upon the experiences gained, many of these pioneering firms have, however, today rather restructuring their national support systems and approached even more distant markets.
such as India and China. Young people got involved in movements such as Attack in order to channel reflection and propose alternative ways to cope with global challenges. The overall lessons seem to be that too general and therefore simplistic national policies easily become dysfunctional when applied by lower echelons in the economy.

There may be many reasons for the uniform response to the globalization process that neglects distinctive local features. The present response to global challenges appears as a reminiscence of the ‘holistic’ systems approach that occupied national governments, corporations and academics in the 1960s. Then the need for unlimited networking rather than a simplistic hierarchical world order had not yet been revealed. When this thinking appeared unproductive in the 1970s and 1980s firms took their own initiative to internationalize and communities mobilized local forces in order to cope with the increasing marginalization (Stöhr 1990). In the 1990s, as indicated, firms tried to build business bridges to other emerging economies, and some of them even by their very conception established global market connections. These ‘born global’ firms appeared as pioneers in the making of a new business practice. However, within the context of cosmopolitan values and practices these firms and the leaders behind were perceived only as representatives of the globalizing economy, not as the pathfinders towards a much more intriguing global setting. This emerging world, I propose, is that of a ‘glocalized’ society and economy alike. This is a society where global challenges call for regional/local tactics as much as national or super national strategies. Why the latter response is needed for obvious reasons when it comes to global ecological change, the complex global socioeconomic fabric in contrast, where intentional action and coincidences combine, need multiple local responses.

Different agents contribute to the enactment of ‘glocal’ tactics where a global outlook guides local measures. ‘Local’ is then associated with an agent/actor, individual or collective, that takes action and interacts within a social and spatial setting that is possible to comprehend and thus ‘control’ in the sense that the outcomes of own initiatives can be imagined. Individuals in their own life-setting and firms in their local markets illustrate such situations where ‘economies of overview’ rule. In the Swedish setting the financially strong municipalities with their qualified competencies may also benefit from such advantages Larger administrative units, for example regional counties (in Sweden ‘län’), run the risk of being
caught in the middle, trying (in vain) to deal with global changes by way of traditional strategic approaches.

The purpose of this text is to elaborate on the generic argument that ‘glocalization’ and its associated tactics are needed to cope with global challenges. This perspective can be adopted from the point of view of the individual entrepreneur, the individual (small family) business and the locality/community. Thus, as a point of departure there is a need to properly identify the constitution, ambitions and capabilities of individuals, firms and localities (Section 2). In Section 3 the implications of these characteristics for the construction of a generic entrepreneurial strategy composed of glocal tactics are elaborated upon. Section 4 further embeds this discourse on glocal tactics in a framework that may frame (national) public-policy measures as well as initiatives taken by local stakeholders.

3.2 Featuring Entrepreneurs, Firms and Localities

In research (family business) owner-managers are often portrayed as rational profit-seeking agents. Although this helps advanced modelling as a scientific exercise, it means cutting corners when representing business realities and being adopted as a basis for policy-making and associated practical/normative advice. Not that such advice is declined – often it can be used to rationalize policy practice as an element of its organized hypocrisy (Brunsson 2003). However, providing policies which also make sense to those concerned – business people in the context where they do their living and practise their business – must be given fair attention.

Academics are also known to spare no efforts when it comes to differentiating between ‘genuine’ entrepreneurs and those running bread-and-butter businesses. The former, sometimes addressed as ‘gazelles’, are favoured since they are associated with opportunity construction/seeking and continuous firm growth. The latter, the traditional small firms, are presumably only concerned with survival and risk avoidance. Their venturing career is triggered by a need to become independent or make a living in their domicile, which means that moving does not become a necessity. ‘Gazelles’ are expected to be profit-oriented and proactive on the market,
systematically planning to successfully seduce external financiers. Traditional family businesses are allegedly reactive and consider external financial capital as a threat to their autonomy. The simplistic assumptions producing this dichotomy are, however, misleading. A study of Sweden’s fastest-growing firms, the country’s gazelles in 2002, most of which are family businesses and located all over the country, communicates quite a different image (Johannisson 2008). This comprehensive inquiry tells us that the weaknesses that conventional wisdom ascribes to (small) family businesses largely reflect the practice of these fast-growing firms and their owner-managers.

As regards the (wo)men behind the growth-oriented firms, less than one out of ten is driven by profit. The others are motivated either by enacting their own idea or crafting their own identity. This suggests that starting and running a business is as much about an existential as about an economic project, as much a way of life as a building block in a professional career. Obviously, irrationalities and emotions and not just deliberate action guide the choices business leaders make while practising their trade. Besides, the boundary between being an owner-manager and a private person with a (mostly) local life dissolves. Businesspersons, and with them businesses, are deeply socially embedded in the community context.

The successful (Swedish) owner-manager differs in several other ways as well from the stereotype produced by economic theory and further normative frameworks. Only a small minority (one out of ten) consider financial resources to be the most important form of capital when it comes to feeding the company. The other respondents, including the far majority, recognize either human or social capital as the most crucial form of capital for the development of the firm. All successful firms spend little time on planning – considering hands-on everyday enactment and also crafting visions much more important. What is more, neither pro-activity nor reactivity characterizes successful firms – inter-activity is the rule.

These features of owner-managed firms and their leaders, constituting the far majority of firms in all (free) economies, also propose strong ties between the persons and their firms on the one hand, and the place were they reside on the other. For practical reasons most time is spent in their physical proximity, which makes different kinds of exchanges natural. Although not all localities can demonstrate the manifold proximities that an industrial district such as the Gnosjö region offers (Johannisson 2009), the firms and
further stakeholders share a responsibility for the development of the community. There is a mutual dependence between the businesses and their leaders on one hand and the local community on the other. This means that involvement in local (business) life means enhancing the development conditions not only for each individual firm and its leader but for the community at large as well.

The distinction between the individual owner-manager, her/his firm and the locality is obviously an unfortunate construction by researchers and policy-makers alike. The creation of this trichotomy thrives on three interrelated myths. The first one concerns the misconception that the rational/cognitive element in human life can and should be separated from the irrational/emotional. Being action-oriented, passionate and social is not a drawback in the business-creation process but a basic condition for its enactment in the first place. The second illusion is that business creation is an economic event that emerges according to an individual’s personal capabilities. However, to the extent that the firm crystallizes out of the continuously evolving personal network of the instigator, the entrepreneur and her/his associates, entrepreneurship is genuinely collective. The third misconception is that the dynamics of small rural communities is restricted to the few local, often small, firms. However, in such contexts different proximities – physical, cultural, social and organizational – embed each firm in a dense fabric of relations. Each network, not to speak of their interrelatedness within and beyond individual business-to-business relations, provides a multiplicity that can be used to deal with a global environment, for example for scanning information and enacting opportunities. Multiple networking reveals the real capacity of a local business community. The existence of 30 small firms in a locality is not an impressive number. Considering that these firms may establish 435 reciprocated relations in every network they establish, for example exchange for professional advice and production systems, however, reveals a story about local variety and potential. Cf. Johannisson, Nowicki, Alexandersson and Senneseth 1994 and Johannisson, Ramirez-Pasillas and Karlsson 2002.

There are several implications of a view that recognizes the social embedding of local small business activity and the mutual dependence between local business and social life. One is that the distinction between opportunistic and necessity entrepreneurship dissolves. First, opportunities emerge out of coincidences which are enacted in complex social processes, whether guided by effectuation
(Sarasvathy 2001) or vision (Johannisson 2008). Necessity may be existential, that is associated with what makes life worth living, and not ‘just’ associated with the pressure to satisfy immediate material needs, as is often the case in developing economies. Also, the decision to start a business in the home district can for good reasons be regarded as an existential and moral necessity. In the Swedish welfare economy as well as in further European settings, people are more tied to place than in, for example, the mobile U.S. culture where footloose profit-seeking presumably directs entrepreneurial careers. In Europe in general and in Scandinavia in particular it is in the owner-managers’ own interest to contribute to the development of the place where they live and run a business. Positive agglomeration economies, as originally pointed out by Marshall (1920), are obviously more frequent in local settings where (small) family businesses in few industries dominate than in local constellations where the permanent population is heterogeneous with respect to industry, size and ownership.

Recognizing the social dimension of entrepreneurship means, identifying it as a genuinely collective phenomenon. This feature is already reflected in the (primary and extended) family’s involvement in almost all new venturing and is explicit in team entrepreneurship. Generally, the enactment of the venture calls for the commitment of different stakeholders, notably resource providers and customers (Gartner, Bird and Starr 1992, Sarasvathy 2001). The collective character of entrepreneurship becomes even more obvious in localized clusters of small family businesses as we meet it in the Gnosjö region. The culture dominating in such settings, including the positive implications of the special Scandinavian version of social control, the ‘Jante law’, holds back entrepreneurship in individual firms. The collaborative features of such networked small-business communities, in the literature addressed as industrial districts (Becattini 1990), however, render them entrepreneurial capabilities as a collective. Gnosjö is Sweden’s only fully-fledged industrial district (Johannisson 2009). The dynamics of its business community has bestowed an outstanding economic success on the region at large – in the 1990s it even outperformed Metropolitan Stockholm. Excluding advanced technology and further unique formal competences only leaves social explanations of the region’s progress.

The attachment to place for historical-cultural reasons is strong in Sweden as a European setting and remains so in a globalizing world.
In spite of the power of digital information technology, the need for the casual, face-to-face meetings that only physical proximity offers apparently does not seem to decrease. Ongoing qualitative research at Växjö University shows that even individuals giving birth to international firms (‘born globals’) in their venturing career are triggered by concern for the family or the locality and have kept their growing business in the place where they have their roots (Ghannad 2008). Research also suggests the superiority of personal networking and the social proximity it offers to other ways of organizing for entrepreneurship in general (Johannisson 2000) and knowledge diffusion in particular (Hägerstrand 1967, Singh 2005). Digital conversations only seem to trigger more intimate encounters between business partners at, for instance, international trade fairs (Ramirez – Pasillas 2007).

Obviously, there is no need to refer to the ongoing debate concerning sustainable (business) development and social entrepreneurship in order to (also) recognize entrepreneurship as social projecting. Nevertheless its vital importance to business creation and subsistence is seldom put on the agenda. However, researchers as well as practitioners who promote localized business alliances, whether we have innovation systems, clusters or more complex structures for business development such as Triple-Helix constellations in mind, pay little attention to the social dimension of (collective) economic activity. Formal agreements and codified knowledge, not relations based on trust and the insights that come out of experiential learning, are worshipped as the engines of growth. Paradoxically, in Sweden there is more concern for technological issues than for carrying out the entrepreneurial function, that of bringing products out on the market. Although Sweden holds a leading position in technological output, it is far below average with regard to entrepreneurial activity as reflected in new firm formation.

The disregard of non-rational factors (also) in the Swedish setting is all the more surprising, considering the long-term concern for industrial and business development as a collective and experiential process. More than half a century ago the Swedish economist Erik Dahmén (1988), forestalling much of the present research and political interest in systemic approaches to economic development, coined the notion of the ‘development (competence) block’. Also inspired by Schumpeter’s work on creative destruction, Gunnar Eliasson has brought this model for systemic industrial development further into a ‘competence bloc’, to which he ascribes six features:

However, neither Dahmén nor Eliasson are explicitly concerned with the regional dimension. Linking the competence-bloc framework to an image of the economy as experientially organized, Eliasson offers a bridge between entrepreneurially instigated high-tech agglomerations and low-tech industrial districts as emerging out of special production and living conditions. The boundaries between the functions that Eliasson’s six key actors carry out are possibly more blurred in industrial districts due to their cultural and social embedding, a contextualization that is basically disregarded in the competence-bloc framework with its national focus.

To conclude, in parallel with amplifying globalizing forces, the understanding of the locality, the region or the community as a generator of entrepreneurial energy has deepened. This is reflected on both national and supranational (EU) political agendas by way of increased decentralization and dependence on local initiatives and in research into entrepreneurship and regional development, where the portion of published papers including a regional dimension has increased considerably over the last few years (Sternberg 2008). The question is, to what extent has that power been recognized beyond political rhetoric and academic discourse?

3. 3 Glocalization: Origin, Process and Outcome

Scandinavian researchers contributed at an early stage to research on ‘born globals’, firms that at their very inception are oriented towards international markets (and therefore also addressed as international new ventures). See for example Madsen and Servais 1997, Moen and Servais 2002, Andersson and Victor 2003. An obvious challenge is to link this firm strategy to collective business activity, as outlined above. The industrial district and its member
firms apparently epitomize the ‘glocal’ strategy meaning that: global competitiveness is gained through local collaboration. Here again Scandinavian researchers have made significant contributions, cf. e.g. Maskell, Eskelinen, Hannibalsson, Malmberg and Vatne 1998, Andersen, Böllingtoft and Christensen 2006. Onsager, Isaksen, Fraas and Johnstad (2007) demonstrate that glocalization as a generic collaborative and competitive approach is amplified when different kinds of proximity are taken into account.

The notions of ‘glocal’ and ‘glocalization’ no longer belong to some extraordinary academic jargon. Google (July 2008) offers more than 400,000 hits to the ‘glocal’ entry and a tenth of that number to ‘glocalization’. Wikipedia’s understanding of this concept is:

Glocalisation (or glocalization) is a portmanteau of globalization and localization. By definition, the term “glocal” refers to the individual, group, division, unit, organisation, and community which is willing and is able to “think globally and act locally.” The term has been used to show the human capacity to bridge scales (from local to global) and to help overcome meso-scale, bounded, “little-box” thinking. The term ‘glocals’ is often used to describe a new social class: expat managers who travel often and switch homes often, and are therefore both global and local. (Wikipedia 080715)

It goes without saying that this definition must be modified to cover our concern for entrepreneurship and business development. This is hardly an altogether new idea – Google offers (in July 2008) well over 1,500 hits where glocalization appears in the context of entrepreneurship. However, since the aim here is to elaborate upon glocalization as a generic entrepreneurial strategy, there is a need for a more detailed account of its origins, its process characteristics and its effects on the conditions for business development and on economic as well as social change.

As regards the triggers of glocalization, a lot has been said above about the need for (local) cooperation in order to cope with increased global competition and the potentials offered by CIT (communication and information technology) to practise such a strategy. As pointed out by Hernes (2003), organized activity is three-dimensional, appearing in physical, mental and social space. What triggers the globalization process in an entrepreneurial setting is the pressure for a double identity, including being both a ‘true’ local in physical space and a ‘genuine’ nomad in mental space. Contrasting Florida’s (2002) message the far majority of entrepreneurs are neither members of a creative class nor nomads. Mobility in mental
space, acknowledging different value systems and cognitive maps, is however important also to entrepreneurs in order to catch up with ever-emerging global change. Interactions in social space, providing a fabric of both local and global personal networks, make the situated focus in physical space and the evasiveness in mental space coexist as a duality. Misguided rationalism make corporations as well as some members of the research community disregard these dynamics, cf. Shaver and Flyer 2000.

As regards its process characteristics glocalization may be both continuous and coincidental (Fletcher 2004). Some international business relations, an outcome of accidental meetings, mature over time and end up as strong ties to distant markets. Once such dyadic relations are established, the trust by which they create and are created is used to mutually introduce the business partner into the local context. This suggests that glocalization processes easily amplify and may well compensate for a marginal location in the home country. A rural business in Sweden doing business with a firm in China may in this way become linked to an urban setting with a population that exceeds that of Sweden. The outcomes of the glocalization process thus is an enforced regional identity and with that an increased awareness of the unique (collective) assets of a locality, cf. Maskell et al. 1998. The local awareness and self-confidence that glocalization as a world view and practice generates offers a much needed setting for reconciling business venturing as an economic as well as an existential project.

3.4 Crafting Glocal Strategies on the Local, Regional and National Levels

Introducing the emergence metaphor into the strategy-making process in a business-firm context Henry Mintzberg intuitively provided a perspective that finally seems to have outmanoeuvred simplistic normative models in the field (Mintzberg and Waters 1982). Today ‘strategizing’ as an emergent practice seems to be well established in the strategy research community (cf. e.g Johnson, Langley, Melin and Wittington 2007). Elsewhere we also recognize its emergence as a generic feature of all entrepreneurial phenomena,
which makes a multitude of ‘tactics’ replace omnipotent individual strategies as a basis for a dialogue with the contexts wherein (business) organizations operate (Hjorth, Johannisson and Steyaert 2003). To the local community may certainly be ascribed organizational features and it ideally provides a very complex organizing context with ‘loosely coupled’ (Weick 1976) agents, including both autonomous and interdependent business firms embedded in an all-encompassing social fabric. Supporting such spontaneous organizing and the collaborative efforts it generates on its own terms means tapping organically produced entrepreneurial energy, cf. Johannisson 1993. Inversely, if external forces put pressure upon such a local setting, the (business) community will presumably protest. As much as small-business leaders reject expert advice that does not reinforce their self-identity (Johansson 1999), self-organized localized business communities decline alien interventions (Johannisson 2000).

The economically and socially vital local community is where glocalization as a generic entrepreneurial strategy can emerge and be maintained. Such strategies appear as bundles of tactics reflecting local practices. ‘Practices’ then, according to Schatzki (2001:2), are “...embodied arrays of human activity centrally organized around shared practical understanding.” Rather than being reflected in a particular vocabulary, local practices appear as inimitable (inter) action patterns. Localized knowledge as a unique asset can only be used and enforced by those already involved, not by professionals equipped with academic knowledge and legitimizing catchwords such as ‘benchmarking’. This notion is based on the assumptions that there is one best way in which every locality is unique as is its road to success. Professional management tries to replace commitment to the firm and to the place as well as tacit knowing with knowledge that is general and thus erases whatever uniqueness there is, compare Maskell et al. 1998, Johannisson 2000.

Contrasting the quite extensive literature on ’born globals’, see Ghannad (2008) for an overview, little research has so far been done on ’born glocals’. I see at least three reasons for this. First, research on entrepreneurship and small business focuses on the growing and internationalizing firm that breaks out of the local setting, perceived as a sociocultural iron cage. Second, many researchers as well as practitioners seem to want to keep the image of qualified localized low-tech rural clusters apart from the innovation systems and high-tech clusters that have been at the top of the agenda over the last decade. Third, considering simultaneously both the
individual firm’s and a (local) firm collective’s economic as well as social aspects on business activity is presumably simply too much for policymakers and for the policy-implementation structure and its tail of consultants.

However, as argued in section 2 above, it is time to acknowledge not only the complexities but also the dynamics of local places as literally meaning-filling and entrepreneurs as not only profit-creating machines but also as human beings, intimately depending on a personal cognitive-emotive setting. Recent experiences, still to be systematically substantiated by research, suggest that the more globalized the economy becomes the more important the local anchoring turns out to be. The more advanced the digital information and communication technology grows to be the more important personal networking becomes. And the more efficiently the globalized economy can meet material needs, the higher the interest in genuine encounters between entrepreneurs/producers and customers/co-producers are in an emerging experience economy. Recognizing these developments and also overcoming the ideologically and cognitively constructed contradictions between explicit high-tech and tacit low-tech knowledge/technology, on the one hand, and the urban and rural way of life, on the other, suggests a dual world that requires ‘glocal’ approaches.

Figure 3.1 Glocalization Encompassing Dual Rationales

Note: The outer, wider graph represents the functional rationale, the inner graph the territorial rationale.
Source: Johannisson and Lindholm Dahstrand 2008
At present a discursive battle is going on between the adherents of two contrasting rationalities, one rational and under-socialized view – the ‘functional rationale’ – and one ‘territorial rationale’, which acknowledges irrationalities such as spontaneous (inter-) action in creative organizing and the need for improvisation in everyday business-making (Johannisson and Lindholm Dahlstrand 2008). In Figure 1 these two rationales are presented as an outer and inner graph qualified by three pairs of contrasting/supplementing concepts. Besides the global/local dichotomy as extremes on an outlook dimension, the exhibit presents the dominant life-setting in the territory (place) and the critical competence needed to materialize emerging ideas as basic elements of the model.

The life-setting dimension juxtaposes the rural and urban ways of life. Usually, we associate the rural way of life with peripheral locations involving strong, reciprocal bonds that sediment into informal institutions. In the urban life-setting ties are instead weak and asymmetric, and formal arrangements dominate the institutional setting. The theoretical foundation of these two contrasting social orientations appear in the notions of Gemeinschaft and Gesellschaft put forward by the German sociologist Ferdinand Tönnies (1965). Where Gemeinshaft rules social interactions is an end in itself while they in the Gesellschaft setting are means for other ends such as wealth or influence. The third dimension, that of ‘competence’, ranges from focused to complex. Focused competence here means approaching challenges with capabilities that the experience carried by the individual as a member of a community of practice has so far generated. ‘Focused’ thus does not (have to) mean trivial and standardized behaviour but rather refers to insights carried by a reflective practitioner. When a focused competence is at its best it emerges into qualified craftsmanship that over time becomes embodied and intuitive, superior to formal knowing and analytical reasoning. Complex competence emerges out of the ability to combine insights from the frontiers of different knowledge fields, constantly reconsidering the knowledge base that is in use. Such complex competence is usually associated with advanced science-based findings but may as well be found in art and in the humanities in general. Design is a field where aesthetics and science may combine into a unique competence.

The outer circular profile as reflecting a functional rationale is at present the dominant recipe for growth and economic development in contemporary society. It is carefully nurtured by a majority of
policy-makers as well as by researchers studying spatial development. This rationale is associated with the global outlook of corporations, institutions and politicians that promote complex innovation systems within a world-wide frame of reference, systems which obviously only metropolitan areas can accommodate. The contrasting image, the inner profile reflecting a territorial rationale, according to a more unobtrusive public discourse, produces a rural community with an outlook that is limited by local norms and networks and whose competences are tied to traditions that concentrate a hands-on knowledge base to a few areas.

It is important to point out that the outer and inner profiles according to Figure 1 are proposed as contrasting ideal images, feasible for the sake of analyzing subsequent empirical findings. The circles also express prejudice and wishful thinking originating in contrasting ideologies. The outer circle represents centrifugal forces which deny any confinement to a specific place. The inner profile, in contrast, originates in ideas put forward in this paper, arguing that any sustainable initiative has to be taken from inside local encounters in order to create uniqueness and viability. However, keeping the two rationales apart appears awkward considering their parallel discursive and empirical manifestations. With the vocabulary proposed by the French philosopher Deleuze it is more productive to see each pair of dual concepts as a ‘contrariety’, i.e. signifying two images that are different yet similar. The vitality of a region is thus constructed out of the awareness of keeping both (extreme) images alive in ongoing discursive and embodied practices. Talking about ‘rural’, ‘local’ and ‘focused’ without (also) having the contrarieties ‘urban’, ‘global’ and ‘complex’ in mind does not make much sense. We thus propose a dual rationale for a mindset and related (inter-)action repertoire that produces entrepreneurial energy out of the very tensions between the ‘functional’ and ‘territorial’ rationales and the associated centrifugal and centripetal forces. Recognizing such a duality suggests that local collaborative practices constructively use the tensions between rural/urban, local/global and complex/focused competence to instigate and maintain change. This means constructively bridging between location externalities associated with industry homogeneity and urbanization externalities originating in size and heterogeneity. Cf. Döring & Schnellenbach 2006.

There is reason to believe that the emergent experience economy will encourage the further practising of glocal tactics building a generic entrepreneurial strategy, whether as original collective
venturing or as an outcome of refurbished industrial districts originating in the manufacturing-industry era. Further pressures towards glocal tactics may be generated on the individual level when entrepreneurs take on glocal identities. This will happen even if personal motives become increasingly influenced by universal values, while everyday (inter)activities will keep even entrepreneurs in place. Supporters of the traditional public-policy focus on (regional) innovation systems as well as on clusters will thus also benefit from a dual or glocal outlook. All the more since there is an increasing awareness of the need for and the feasibility of also considering the extremes of life-styles and competences in parallel, again very much thanks to the freedom offered in a digitalized world. How that freedom is used is up to individuals as entrepreneurs or citizens in their local context to decide.

One question remains: What are the roles of policy-makers on the national level in a world dominated by agents who practice glocal strategies? Acknowledging a federative organizing principle national policies and measures should focus on supporting and thus amplifying local and regional initiatives. National bodies may also provide arenas for exchange, as much on the national as on the international level. Public business support targeting individual firms should consider the interest and ability of firm’s willingness and ability get involved in the local business community. An additional role of the national political system is to create an absorptive capacity among public agents, such as the universities, to provide regions, municipalities and further localities with tailor-made knowledge.
3.5 References


4. Small Enterprises, Large Firms and Growth

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Abstract

The bulk of private R&D spending in the U.S. is shown to come from a tiny number of very large firms. Yet the revolutionary breakthroughs continue to come predominantly from small entrepreneurial enterprises, with large industry providing streams of incremental improvements that also add up to major contributions. Moreover, these firms voluntarily disseminate much of their innovative technology widely and rapidly, both as a major revenue source and in exchange for complementary technological property of other firms, including direct competitors. This speeds elimination of obsolete technology. Some policy implications for industrialized and developing countries are discussed.

In seeking to explain the unprecedented and, indeed, miraculous growth performance of the free-market economies, this paper focuses upon the difference in, but complementary relationship between, the characteristic innovative contributions of large and small entrepreneurial firms, pointing out that these two groups have tended to specialize in different components of society’s innovation process. The major breakthroughs that are indispensable for growth have tended to come from small new enterprises, while the invaluable incremental contributions that multiply capacity and speed, and increase reliability and user-friendliness, have been the domain of the larger firms. Together, the two have contributed far more than either would have by itself. Thus, an effective governmental program for encouragement of growth should minimize disincentives for the innovative activities of both small and large enterprises.

In addition, important innovations continue to flow from two groups outside the market sector: the government and the universities.
I will point out some of the truly astonishing contributions that have come from each of the four sectors. The implication is that to ensure that the pertinent arrangements and institutions are really effective in the promotion of economic growth, it is essential that each is provided with the appropriate incentives to undertake its role in the process. For any modern economy concerned with this issue, understanding of the roles of the four key sectors and of the requisites for effectiveness of their participation constitutes a road map for public sector growth policy.

4.1 Revolutionary Breakthroughs: A Small-Firm Specialty

It is convenient here to divide up inventions in terms of two extreme categories: revolutionary breakthroughs and cumulative incremental improvements. Of course, many new products and processes fall into neither extreme category, but are somewhere in-between. Still, it will become clear that the distinction is useful. Moreover, there are many examples that clearly fit into one of these categories or the other quite easily. For instance, the electric light, alternating electric current, the internal combustion engine, and a host of other advances must surely be deemed revolutionary, while successive models of washing machines and refrigerators – with each new model a bit longer-lasting, a bit less susceptible to breakdown, and a bit easier to use – constitute a sequence of incremental improvements.

The relevance of the distinction will become clear in later sections of this paper, which will discuss the working and organization of R&D in the large business organization. The inherent conservatism of the process naturally leads the giant firms to specialize in the incremental improvements and to avoid the risks of the unknown that the revolutionary breakthrough entails. The latter, rather, is left most often to the small or newly founded enterprise, guided by its enterprising entrepreneur. Though that may perhaps be expected, the degree of asymmetry in the apportionment of this specialized activity between large and small firms in reality is striking. The U.S. Small Business Administration has prepared a chart listing breakthrough innovations of the twentieth century for which small
firms are responsible (reproduced here in Table 4.1), and as will be seen, its menu of inventions literally spans the range from A to Z, from the airplane to the zipper.

Table 4.1 Some Important Innovations by U.S. Small Firms in the Twentieth Century

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<tr>
<th>Air Conditioning</th>
<th>Heart Valve</th>
<th>Portable Computer</th>
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<tr>
<td>Air Passenger Service</td>
<td>Heat Sensor</td>
<td>Prestressed Concrete</td>
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<td>Airplane</td>
<td>Helicopter</td>
<td>Prefabricated Housing</td>
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<td>Articulated Tractor Chassis</td>
<td>High Resolution CAT Scanner</td>
<td>Pressure Sensitive</td>
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<td>Artificial Skin</td>
<td>High Resolution Digital X-Ray</td>
<td>Cellophane Tape</td>
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<td>Assembly Line</td>
<td>High Resolution X-Ray</td>
<td>Programmable Comp.</td>
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<td>Audio Tape Recorder</td>
<td>Microscope</td>
<td>Quick-Frozen Food</td>
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<td>Bakelite</td>
<td>Human Growth Hormone</td>
<td>Reading Machine</td>
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<td>Biomagnetic Imaging</td>
<td>Hydraulic Brake</td>
<td>Rotary Oil Drilling Bit Biosynthetic</td>
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<td>Insulin</td>
<td>Integrated Circuit</td>
<td>Safety Razor</td>
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<td>Catalytic Petroleum Cracking</td>
<td>Kidney Stone Laser</td>
<td>Six-Axis Robot Arm</td>
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<td>Computerized Blood Pressure</td>
<td>Large Computer</td>
<td>Soft Contact Lens</td>
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<td>Controller</td>
<td>Link Trainer</td>
<td>Solid Fuel Rocket Engine</td>
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<td>Continuous Casting</td>
<td>Microprocessor</td>
<td>Stereoscopic Map Scanner</td>
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<td>Cotton Picker</td>
<td>Nuclear Magnetic Resonance</td>
<td>Strain Gauge</td>
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<td>Defibrillator</td>
<td>Scanner</td>
<td>Strobe Lights</td>
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This remarkable list, it will immediately be recognized, includes a strikingly substantial share of the technical breakthroughs of the twentieth century.

One is, then, led to the plausible conjecture that most of the revolutionary new ideas of the past two centuries have been, and are likely to continue to be, provided far more by independent innovators who, essentially, operate small business enterprises. But now it may seem that there is little left for the large enterprise to contribute to technical progress. That, as we will see next, is also a misleading conclusion.

4.2 Market Pressures for an Enhanced Large-Firm Role in Technical Progress

Free competition – that is, competition not handicapped by severe government regulations or tightly enforced customary rules, like those of the medieval guilds that prevented gloves-off combat among rival firms – has arguably played a critical role in the growth of the capitalist economies. Often overlooked is the significance here of rivalry among oligopolistic firms—those large firms in markets dominated by a small number of sellers. And crucial here is the fact that in today’s economy many rival oligopolistic firms use innovation as their main battle weapon, with which they protect themselves from competitors and with which they seek to beat those competitors out. The result is precisely analogous to an arms race – to the case of two countries, each of which fears that the other will attack it militarily and therefore feels it necessary always at least to match the other country’s military spending. Similarly, either of two competing firms will feel it to be foolhardy to let its competitor outspend it on the development and acquisition of its battle weapons. Each firm is driven to conclude that its very existence depends, at the least, on matching its rivals’ efforts and spending on the innovation process. In an economy in which this is so, a constant stream of innovations can be expected to appear, because the giant warring firms to whom the story pertains do not dare to decrease their innovation activities.

As a result, the large firms are driven to lead the economy in spending on innovation. According to data gathered by the National
Science Foundation (National Science Board, 2000, Chapter 2, p. 24), in the year 2000, 46 percent of total U.S. industrial R&D funds were spent by 167 companies with 25,000 or more employees; 60 percent of these funds were spent by 366 companies with at least 10,000 employees, and 80 percent was spent by 1,990 firms of 1,000 or more employees. At the other end of the spectrum, only about 15 percent of total U.S. industrial R&D funds were spent by 32,000 companies with fewer than 500 employees each.

In the large enterprises, innovative activities are carefully designed to prevent unwelcome surprises and to keep risks to a minimum. As a result, there is little of the free-wheeling, imaginative, and risk-taking approach that characterizes the entrepreneur. Instead, the large firm’s top management often keeps a tight rein on the activities of the company’s laboratories, with budgets determined by the upper strata of control within the firm, who also may determine how many persons and what sort of specialists at what levels will be employed on R&D endeavours. It is not even unusual for people untrained or inexperienced in research to determine what new products and processes the laboratories should next seek to discover.

### 4.3 Revolutionary Consequences of Aggregated Incremental Improvements

The bureaucratic control typical of innovative activity in the large firm serves to ensure that the resulting changes will be modest, predictable and incremental. These firms are not predisposed to welcome the romantic flights of the imagination, the entrepreneurial leaps of faith and plunges into the unknown that often lead only to disaster, but which alone are likely to open up new worlds.

However, having recognized the critical role of the smaller enterprises, one should not go to the other extreme and undervalue the incremental contribution of the routine activity that at least sometimes arguably adds even more to growth than do the more revolutionary prototype innovations. Though each such small improvement may be relatively unspectacular, added together they can become very significant indeed. Thus, consider how much successive improvements have added to the speed, capacity, ability to cover distance and safety of the Wright brothers’ early airplanes.
Table 4.1 provided a set of extreme examples of the contributions of the small, entrepreneurial firms. But one can easily obtain equally startling examples of the magnitude of the innovative contributions of the large companies, whose incremental contributions can add up and compound to results of enormous magnitude. One such illustration is the progress in computer chip manufacture by the Intel Corporation, which is the leading manufacturer of these devices and has brought to market successive generations of chips and transistors, on which the performance of computers is so heavily dependent. According to a recent report, over the period 1971-2003, the “clock speed” of Intel’s microprocessor chips – that is, the number of instructions each chip can carry out per second – has increased by some 3 million percent, reaching about 3 billion computations per second today. During the period 1968-2003 the number of transistors that can be purchased for a dollar has grown by five billion percent. These are evidently no minor contributions. It is only the combined contribution and the subsequent incremental improvements that made possible the powerful and inexpensive apparatus that serves us so effectively today.

4.4 On the Role of Government and the University in Innovation

A revised analysis of the forces making for economic growth also must not overlook the government’s role in promotion of economic output and its expansion. The government has played two critical roles, one active and the other passive. The passive contribution is provided primarily through the legal infrastructure that encourages entrepreneurship, the formation of new firms and investment in the innovation process by larger competing enterprises. That entails well-recognized provisions such as property rights and enforceability of contracts. It also entails absence of government acts of interference in the exchange of technical information and access to patented intellectual property, as well as avoidance of rules on employment and rental that inhibit the formation of new firms. On the active side, government support of basic research has proven to be invaluable, since with its uncertainties and unpredictable beneficiaries, such
research is not highly attractive to private enterprise, though it can be critical for innovation and growth in the long run.

It is to governments and universities that we must look primarily for the results provided by basic research as distinguished from applied research. The reasons for this division of labour with private industry are well understood, and only a few words need be said on the subject here. From the point of view of the unthinking market mechanism, expenditure on basic research is a “wasteful” expenditure, because the outlay promises no addition to the profits of the firm. By its very nature, it is nearly impossible to predict whether basic research will yield any financial benefit at all and, if so, who will ultimately be the beneficiary. Certainly, it need not be the enterprise that carried it out. That is why governments and universities have had to step in, if basic research of any magnitude was to be carried out. And as we know, it is important for growth in the long run that this be done, for so much of applied innovation is made possible or is at least stimulated by its results.

4.5 The Invaluable Contribution of “Mere Imitation”

It is predictable that most of the innovation that the newly established small firms in a relatively small industrial economy can expect to introduce will not have been contributed by the country’s own R&D activities, but by those of other countries. This is not to be regarded as a deficiency. In a world in which almost all major technological development takes place in some 25 countries, and in which technology licensing and trading is increasingly common, it is a tautology that if none of the countries falls significantly behind, then the average country should expect some 24/25ths of its new technology to come from abroad.

The imitation process that is evidently so important is the source of a significant misapprehension. The notion is that the imitation process has little or none of the attributes of a truly innovative activity. But that is simply incorrect. History is replete with examples of substantial improvements that were contributed by the imitators. In part, these improvements are elicited by the need to adapt the
technology to local conditions, including differences in size of the market, in the nature of consumer preferences, in climatic conditions and in the character of available complementary inputs. Thus, there is nothing inherently inferior about a process of organized imitation of foreign technology. Indeed, as one historian who specialized in the history of innovation has observed, “...every invention contains some borrowing and every borrowing some invention” (De Camp, 1963).

Moreover, as just noted, every economically advanced nation can be expected to do it and to run the risk of falling behind if it does not. Even the U.S. and Japan, the two leading contributors to the world’s stock of new products and processes, derive a substantial proportion of their latest technology from elsewhere. For every advanced economy, innovation will continue to be of prime importance for economic growth. But one may well expect that a substantial proportion of that innovation will be obtained from foreign sources. And to be an effective user of such foreign technology, it is important for the country to ensure that it is a skilled imitator as well as an effective innovator.

4.6 On Governmental Policy for Promotion of Innovation and Growth

Given the four contributory sources that play critical roles in expanding an economy’s innovation and growth – entrepreneurs and small firms, large firms with internal R&D capacity, universities, and government – one is driven to conclude that effective programs for facilitation and stimulation of entrepreneurship are important, but that there is more that can be done than is currently being done for this purpose. In this section, I offer a few illustrative suggestions that seem to merit consideration by the designers of policy. Of course, since the subject here is public policy, what will be said relates to the role of government – not the role of government as innovator on its own, but, rather, as facilitator of the innovative work of others.
The most obvious step that can make it more attractive to become a productive entrepreneur is the removal of any handicaps to the creation of a new firm. This is not as obvious a step as it may seem. In many parts of the world the bureaucratic impediments to firm-creation remain drastic.

Even in countries such as Sweden and the U.S. there are grounds for concern about the more distant future, threats arising from developments such as the increasing tendency – at least in the United States – of many start-up companies to sell out to larger firms rather than to expand as continuing independent firms. Indeed, a substantial number of larger firms, rather than innovating themselves, wait for the innovative companies to prove themselves first in the marketplace and then buy them up after they do, or at least purchase stock in the high-tech companies.

Here the worry is that small, young innovative companies with potentially radical and disruptive technologies will not be able to attain their prospective capacities – nor will their innovations – if they are regularly absorbed by larger, more bureaucratic firms, which may not have the same entrepreneurial spirit or culture. This process remains a matter to be watched, and may require policy adjustments to keep the pipeline of innovative, start-ups full.

One public policy development in the U.S. that is particularly relevant to Europe, and that may affect the launch of future innovative companies is the unintended effect of the recent tightening of the bankruptcy law. Congress amended the U.S. bankruptcy laws in 2005 apparently unaware that a substantial proportion of all personal bankruptcies in fact may be business-related. The modifications of the bankruptcy law – which force those who declare bankruptcy to repay more of their debts may unintentionally discourage the formation of new enterprises by increasing its risks. Bankruptcy laws are important because the more difficult it is to exit from a business, the less likely it is that innovative entrepreneurs will take the risk of getting started in the first place. We must not forget that impediments to an unsuccessful firm’s exit can be, in effect, the equivalent of an increase in the cost of entry.
In Europe, the effects of attitudes toward bankruptcy seem to be more serious as disincentives for reasonable entrepreneurial risk taking. The European rules and attitudes are even more substantial impediments to exit and second attempts than those in the U.S. Much may be gained by steps to modify this state of affairs, perhaps via strengthened safety net legislation protecting the entrepreneur whose enterprise has failed. Obviously, excessive risk avoidance can be an effective impediment to enterprise.

**Discouraging Unproductive Entrepreneurship**

Unproductive entrepreneurship can take many extreme forms, such as enterprising corruption and formation of organized crime syndicates. But it can also involve activities that are legal, like enterprising lobbying of legislatures to induce them to adopt laws that bring profits to the lobbyists or their clients at the public’s expense. The courts and regulatory agencies provide many opportunities for a clever lawyer-entrepreneur. Relative to other countries, the United States fortunately has little problem with corruption, at least as measured by the rankings of Transparency International, a non-governmental organization which ranked the United States 17th out of the 150 countries on its 2005 corruption perception index. This information can be found at [http://www.transparency.org](http://www.transparency.org).

A larger problem is the mounting collection of interest groups and lobbies, which lead, at best, to inefficiency and, at worst, detract from growth. Examples are not hard to find; lobbying by U.S. farmers to obtain large subsidies (which makes it difficult for the United States to promote trade liberalization); lobbying by the high-tech and entertainment industry to extend intellectual property rights thereby handicapping the dissemination of new ideas; and rent-seeking litigation, in which firms compete to obtain monopoly licenses, or in which they sue their more successful competitors in hope of obtaining protection by the courts from the effective competitive activities of their rivals. Each of these activities makes use of the innovative efforts of the lawyers and others involved. Resourceful lobbyists can think of new approaches for attaining their objectives and ingenious litigants can be innovative in their courtroom activities, thereby obtaining large payoffs if their efforts succeed, and in the process simply transferring resources from one pocket to another without contributing anything to total output.
It is not easy to solve these problems. It may seem that the lobbying problem can be curtailed by measures such as publicizing of monetary contributions to the campaigns of elected officials. But the proliferation of advocacy organizations, which are not subject to disclosure requirements and, perhaps, cannot be under the U.S. Constitution, has shown how easy it is to get around such rules.

Governments can also adopt rules that limit rent-seeking litigation, although these can be controversial and could be inconsistent with preservation of the ability of injured parties to seek redress for their legitimate grievances.

*A Government Role in Acquisition of Foreign Technology.*

Economists generally agree that government can play a useful role in the provision of certain socially valuable goods and services because private enterprises lack the incentive to supply optimal quantities of such outputs. Basic research, as just noted, is one important example. The encouragement of technology transfer from abroad is another significant case in point. In particular, it is important for an economy of smaller or medium size to recognize the contribution to its growth offered by rapid acquisition and absorption of technological information from elsewhere. But the transfer process has significant attributes that invite a role for the public sector. For example, the work of monitoring foreign technical journals and of providing translations of pertinent articles can be carried out nearly as cheaply for a multiplicity of small firms, or even for a considerable number of industries, as it can on behalf of any single business enterprise.

Countries appear to have differed substantially in the quantity of resources they devote to this purpose. Edwin Mansfield (1990, p. 343) reports, on the basis of a survey of 100 American firms in 13 industries, that these respondents believed only 29 percent of U.S. firms spend as large a percentage of their sales on the monitoring of foreign technology as the average amount spent by the Japanese, only 47 percent as much as the Germans do, only 51 percent as much as the French do, and only 70 percent spend as much as the average British enterprises in the corresponding industries. Such disparities may well constitute an opportunity for a country to gain a differential advantage in its monitoring and adoption of foreign technology. For example, it may prove to be profitable socially for a government to establish a special Office of Technology Transfer, with a staff of specialists qualified to monitor, translate and disseminate...
pertinent materials in foreign publications. This, surely, constitutes a form of industrial policy that should make sense even to those economists who are most suspicious of public-sector intervention. More specifically, it is easy to describe some illustrative steps that can be taken in carrying out such a program:

**Education and training.** The government can establish a set of well-funded scholarships for the study of engineering and other pertinent subjects by a smaller country’s students studying in the U.S., Japan, Germany, and several other countries that are leading producers of innovation. This program would include funding of an intensive set of language courses that would prepare the students for their studies abroad. The students can be obligated, upon completion of their courses, to take suitable jobs in their home country’s industry or government for a period of (say) five years after completion of their studies.

**Immigration of foreign technicians and related personnel.** A fund can be established to provide subsidies for the immigration, permanent or temporary, of foreign scientists, engineers and technicians who can provide knowledge to their home-country industry about current foreign technological developments. It may be desirable to require such a prospective immigrant to be sponsored by a home-country firm, university or government agency, with the sponsor obligated to provide employment to the immigrant, and to make a case that the immigration of the individual in question will make a substantial contribution to absorption of useful technological information by native industry.

**Establishment of observer staff in the country’s embassies.** At several countries that are leaders in innovation, the embassy in such a leader country of any growth-seeking economy should be provided with a special technology monitoring staff of a size that can be deemed adequate to keep track of technical journals, company newsletters and other available published materials, and arrange for translations where desirable, making those translations available to home-country firms, and to provide such information from other legitimate sources. These specialists can also help to facilitate technology transfer agreements between those firms and home-country enterprises. Frequent contact between these embassy staff members and suitable representatives of home-country industry can ensure that the efforts of the embassy observer staff are directed in a manner that is as useful as possible.
Study of measures taken by governments in other countries to facilitate absorption of foreign technology by their industry. A suitable group in the universities or elsewhere can be given funds to support an extensive and systematic study of the programs of other governments to encourage the acquisition of foreign technology, with the study describing the programs, their working and their degree of success. Interviews with businesspersons in the countries in question can be used to provide analysis of the effectiveness and shortcomings of each of the programs. The study can provide a report and a set of recommendations based on foreign experience to the appropriate committees of the home government.

The preceding remarks are merely offered as examples of what sorts of measures are at least worthy of consideration.

4.7 Concluding Comment

The primary lesson that follows from the discussion here is that the future prosperity of any economy depends to a considerable extent on its success in promoting entrepreneurship, innovation, and the effective and prompt importation of technological advance from abroad. In all of these, the small firms and, in particular, those that were recently established play a critical role in the growth of the economy. It is a serious mistake for public policy to overlook measures that encourage their activities.
4.8 References


5. Facilitating a Rational Process Model of Entrepreneurial Team Formation through Designing Effective Social Networks

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5.1 Introduction

Globalization has radically transformed the entrepreneurial environment. Historically, the relevant environments for most entrepreneurs were typically local, occasionally regional, and rarely national. By contrast, new ventures now face the prospect of competition and cooperation on a global scale. In this new context, old practices that worked well must be re-examined. Strategies that sufficed when entrepreneurs were working within a local community or regional context often break down when extended to a larger scale. Traditionally, entrepreneurs relied upon resources obtained through social networks that were very familiar to them and that included people whom they knew well enough to trust implicitly. Teams built through these social networks were tight knit but also very homogeneous.

Team homogeneity was not a particular problem when entrepreneurs were mainly concerned about competition and cooperation on a local scale. Entrepreneurs sacrificed diversity in team membership in favour of familiarity and trust. However, competing on a global scale enforces much greater demands upon the competencies of new ventures, placing a premium on access to heterogeneous sources of information and resources. In this paper, I argue that the changing global context requires entrepreneurs to be much more forward thinking in putting together entrepreneurial teams. I note that our research fundings on team formation show how difficult it is for entrepreneurs to break away from strategies
that promote homogeneity, given their dependence upon the composition of their social networks.

Entrepreneurial teams found most new ventures, particularly those that are highly capitalized and growth oriented. Teams confer many instrumental and social-psychological benefits on new ventures and studies uniformly find that teams do better than solo founders, regardless of the measured outcomes. Potential entrepreneurs clearly have a stake in putting together an effective team, but so do the organizations, institutions, and public agencies that benefit from the consequences of entrepreneurship. Old models of team formation simply take the social network context as given, whereas globalization has placed a premium on coming up with creative ways to reshape networks. In this paper, I argue that certain kinds of social network structures are more likely than others to generate strong entrepreneurial teams, and I examine the contributions that institutions and public authorities interested in strengthening new ventures abilities’ to compete on a global scale might make to the conditions facilitating such structures.

5.2 Team formation

Two models dominate the literature on entrepreneurial teams. First, a rational process model of team formation emphasizes selecting members based on pragmatic instrumental criteria, such as complementary skills or work experiences. From this viewpoint, competency should shape team formation so that new ventures possess the capabilities needed to manage complexity and growth. Second, a social psychological model emphasizes the interpersonal fit between team members and the need for smoothly functioning group processes. Many scholars have pointed to the important role that social and emotional support play in affecting human behaviour. For example, positive social relations within a team can create a supportive context within which people are encouraged to undertake innovative actions.

The two sets of principles are not mutually exclusive. Within the constraints of interpersonal attraction, teams can still search instrumentally for members. Similarly, within the constraints
of resource-based needs, teams can still choose people who are “attractive”. Nonetheless, as a normative principle, strategists prefer the rational process model over the social psychological model, noting that new members ought to be chosen based on knowledge demands and resource connections. Indeed, some strategists argue that meeting global competition requires that entrepreneurs adopt a rational process model. By contrast, a great deal of evidence indicates that team formation is better explained by social-psychological theories, given the kinds of social networks within which most teams form.

Under what conditions might team formation follow a more rational process, and can those conditions be affected by public policy? I believe the rational process model works best in social network environments characterized by norms of universalism and competence, shared standards regarding what constitutes effective performance, and search processes facilitated by the free flow of information. Scale-free networks support these conditions, to a large extent, although they may also be found in some small-world networks. In this paper, I outline how this process might work and held the resulting more diverse new ventures are better placed to compete on a global scale.

5.3 Models of Social Networks

In a recent paper, my co-author and I (Aldrich and Kim, 2007) introduced various network models with which to understand entrepreneurial team formation. For each model, we focused on two issues: (1) the extent to which the social world is organized into local clusters of densely connected individuals who interact primarily with one another, and (2) the average path length between individuals in the network, conceptualized as the average number of intermediaries it takes to connect any two randomly chosen individuals. The first issue speaks to the issue of recruitment into entrepreneurial teams across social locations and the second sheds light on the dilemmas involved in long-distance searches for team members.

First, a random network model presumes a highly individualized world in which everyone has nearly unlimited access to everyone
else, constrained only by limits on the resources that can be devoted to the search for new social ties. Paths between distant people are short because they are not constrained regarding who they can interact with and so everyone is available as an intermediary or broker. Second, a fragmented network model presumes a highly clustered world in which people’s searches for new ties are highly circumscribed by their environments, with people’s ties connecting them mainly to others in their same social context. Third, a small world network model posits a world that is fragmented into clusters, but in which the clusters are linked by bridging ties. Such ties serve as short cuts connecting many local clusters to other clusters, potentially reducing average path lengths to those found in random worlds.

Fourth, a scale free network model presumes that social networks arise through a process that results in a robust and highly structured hierarchical system that is extremely resistant to disruptive events. Path lengths are short because a small number of highly connected nodes dominate the distribution, with many nodes having a small number of ties. These networks may also have local clusters, making them also small worlds. Empirical observation of social networks has found that few resemble pure scale free networks. Instead, the distribution of ties follows a power law distribution with a “fat tail,” and thus some analysts call them “truncated scale free” networks. In this paper I will focus on scale free networks, but to put them in context, I briefly discuss the other types.

5.4 Fragmented and Small World Networks

Models of fragmented networks differ from models of random networks in that rather than connections being formed randomly, relationships are clustered together in local networks, such as neighbourhoods, friendship circles, or workplaces. Such clusters form because socio-cultural constraints substantially limit the extent to which any two persons might encounter one another. Most ties are based on homophily, rather than randomness. “Homophily is the principle that a contact between similar people occurs at a higher rate than among dissimilar people” (McPherson, Smith-
Lovin, and Cook, 2001: 416). These conditions increase the density of connection within clusters and reduce the chances that people in one cluster will have contacts with people in other clusters. By making it more difficult to enact ties with dissimilar others, such clusters potentially raise the average path length in social networks. Indeed, some people may be in clusters so isolated that they are cut off from most of the world.

Small world networks differ from fragmented ones, according to network theorists, to the extent that local clusters of nodes are linked to other local clusters through bridging ties. These bridging ties link clusters together to form a global network. Small world theorists have shown that a surprisingly small number of long-distance bridging ties have to be added to otherwise fragmented social networks to create a small world (Watts, 1999). These bridging ties jump over otherwise wide gaps in a network, thus lowering the average path between any two points. Note that small world theorists do not make claims about the frequency with which small world networks occur in the real world, but only that networks meeting these conditions will be small world networks. In principle, now that we operate in a globalized economic environment, bridging ties have the potential of allowing entrepreneurs to take effective action well beyond their immediate environments.

**Homophily and clustering**

Social science research strongly supports the proposition that social structural conditions generate densely linked local clusters. Researchers have extensively documented the generalization that “birds of a feather flock together,” in studies ranging from research on friendships and teams to studies of cultural and voluntary associations and business organizations. Homophily constitutes the central principle behind these consistent findings. In the language of social networks, the “friends of our friends” are already our friends, rather than strangers unknown to us.

Local clusters form in ways that sustain and amplify homophily. Strong boundaries deflect social relationships back upon themselves, thus fostering highly concentrated social networks. For example, instead of extending an open public invitation to join, existing clusters recruit new members either by specifically recruiting them (e.g., LinkedIn users send an invitation via email to other potential users) or through drawing on their current ties in other domains
Because individuals who share similar characteristics are more likely to know each other, these individuals tend to form dense clusters in which everyone knows everyone else.

5.5 Truncated Scale Free Networks

Truncated scale free networks differ in several ways from random and small world networks. Small world networks can also be scale free, whereas by definition, random networks are not. Thus, I begin by highlighting the differences between random and scale free networks and then discuss their relation to small world networks. Scale free networks follow a power law in the distribution of their nodes and ties, unlike random networks, which follow a Poisson distribution. In scale free networks, some nodes have a very large number of ties (in and out) and most of the rest have very few. By contrast, random networks have a peaked distribution in the number of ties per node, and the distribution is very homogeneous, centered on the mean and mode. Small world networks can also have a scale free distribution of ties. Unlike the small world networks described in the previous section, the connectivity of a scale free network does not depend on shortcuts closing long-distance gaps between clusters. In scale free networks, reductions in path length between nodes are achieved through a small number of highly connected nodes, rather than through a few links serving as short cuts between clusters.

How might scale free networks emerge?

Barabási (2002) and his collaborators proposed two simple principles by which to understand how scale free networks grow: growth takes place one node at a time and new nodes link to existing nodes following a principle of preferential attachment. As each new node is added to the network, it links to a few others. These links are not made randomly, but rather the node “observes” which nodes already have the most links and then link to them.

Following the principle of preferential attachment means, “the rich get richer,” thus increasing inequality in a network. However, it is only probabilistic: not every new node links only to the most
preferred. For growth to result in a scale free network, it is only necessary that a high proportion of new nodes follow the preference principle. Some newcomers will not flock to the most highly connected nodes, because they have divergent preferences or because of capacity constraints on the ability of the most highly linked nodes to handle large numbers of ties arriving in a short interval. Nonetheless, if a large enough proportion of newcomers follow the principle of preferential attachment, the resulting network evolves into one with a few highly linked and many sparsely linked nodes.

5.6 Application to Entrepreneurial Teams

I noted earlier that the literature on entrepreneurial teams has proposed two principles by which teams might form. The rational process model of team formation emphasizes selecting members based on pragmatic instrumental criteria, whereas the social-psychological model emphasizes the interpersonal fit between team members. I argue that the instrumental model fits best those teams that emerge in well-institutionalized fields characterized by networks whose degree distributions resemble truncated scale free or exponential distributions with fat tails. By contrast, the social-psychological model fits best for the vast majority of team foundings, in part because they are embedded in disconnected and homophilous local clusters that only sporadically coalesce into small worlds containing shortcuts to diverse other clusters.

Teams in well-institutionalized scale free networks

We can gain insight into the special social structural conditions under which most entrepreneurial teams form by examining teams emerging within networks characterized by power law distributions with fat tails: creative teams of co-authors in academic disciplines and creative teams in the Broadway music industry (BMI). In their work on team assembly mechanisms in four academic fields and the BMI, Guimerà et al. (2005) found that the set of people from whom teams were drawn was embedded in a larger network which acted as a storehouse of past knowledge created within the field. The large
network of participants shared common professional standards, norms of collaboration, and was national in scope. Over time, the fields became increasingly integrated, moving from semi-isolated small clusters to a single large connected cluster. A small number of very prestigious actors acted as brokers and created bridges between clusters, lowering the average path length for the entire network. Founders assembling teams thus had a very large community of practitioners from which to draw, with shared social identities.

Team sizes in all fields increased over time, reflecting the growing complexity of the fields and external performance pressures. Clearly, competence was a very important criterion in assembling teams and we would expect universalistic norms to govern recruitment. These teams exemplified many of the desired characteristics identified by the “rational process” models of entrepreneurial team formation: adequate size, skill diversity, shared prior experiences, and high human capital. Even so, the investigators found a very strong tendency for people to repeat past collaborations, just as in the venture capital industry. At least for the BMI, the shape of the degree distribution could be characterized by a power law with an exponential tail, meaning it was highly skewed with a few people at the top with many ties and many people with only a few ties (Jarrett Spiro, personal communication). In this respect, it resembled the VC industry repeated tie distribution in recent research (Kogut et al., 2007), indicating that a process of preferential attachment seemed to be driving the national network for the BMI.

Eventually, the entrepreneurial networks resulting from this process created a nationally linked system within which effective teams were formed very efficiently. By implication, the new ventures created in this process were much sharper competitors then in previous eras. Ventures formed on the basis of competence and universalistic recruitment make formidable competitors on a national and global scale, compared to the ventures formed solely within local networks.

The social structural condition underlying team emergence in these five fields provide a sharp contrast to the much more locally oriented networks out of which most entrepreneurial teams emerge. Nonetheless, they could well be descriptive of particular subfields of entrepreneurship, such as within regional clusters around Route 128 or Silicon Valley or within particular industries drawing on national talent pools where prestige and status affect the recruiting process. In fields where status and reputation strongly govern choices of
which ties to form, we would expect scale free networks to form (Pollock, 2004; Pollock, Porac, and Wade, 2004; Stuart, Hoang, and Hybels, 1999). The venture capital industry represents a particularly promising place to look for scale free networks, based on status and reputation effects, given the high degree of uncertainty facing its participants. In their analysis of U.S. venture capital firms’ investments, Sorenson and Stuart (2001) noted that frequent reliance on investment syndication, rather than solo investing, created a dense VC interfirm network that structured the flow of information in the industry.

The venture capital industry is a good example of how globalization has changed the conditions under which entrepreneurs operate. Models developed within particular national markets now spread quickly to other national markets, leading to the rapid diffusion of best practices around the world. Sometimes, of course, models are adopted inappropriately or without due consideration of the risks involved. Nonetheless, when venture capitalists evaluate the composition of firms they are considering funding, they now bring a rational process model to that assessment, putting pressure on entrepreneurs to be more self-conscious and systematic about team composition.

**Mundane entrepreneurial teams**

In contrast to entrepreneurial teams formed in well-institutionalized fields, teams emerging under typical circumstances are deeply embedded in local clusters of social relations. We cannot assume that most nascent entrepreneurs are operating in a small world context in which ties to other clusters help them recruit diverse members for their founding teams. Whereas Guimerà et al. (2005) could take for granted an instrumental basis for team formation as scientists searched for co-authors and Broadway producers sought choreographers and composers, interpersonal relations take priority in mundane foundings. Under such conditions, few teams will recruit out-of-cluster members.

**Homophily and familiarity in team formation**

Using data from the Panel Study of Entrepreneurial Dynamics, a representative national survey of 830 people who reported they were in the process of trying to start a new business in 1999-2000, Ruef
et al. (2003) showed that two principles dominated team formation: homophily and familiarity. In the PSED, teams were extremely homogeneous with respect to gender, race, and occupation. For example, racially homogeneous teams appeared in the data at a level 27 times that expected based on random mixing, and gender homogeneous teams – net of spousal pairs – were about 5 times more likely than expected. As we followed the founding efforts over time, we observed that they became more gender and racially homogenous as people left and new members joined the teams.

Familiarity is also a key social mechanism of in-group formation, and can be a result of pre-existing ties, such as through work or family. The principle of familiarity asserts that people, who associate with one another, under certain conditions, become more likely to continue the association subsequently in other circumstances. How far outside their immediate circle are founders prepared to go in building a team? Research shows that people rarely establish “relationships” with those they meet by chance (Grossetti, 2005). Instead, local clusters of family, friends, work, and neighborhoods will serve as the pool of people available for recruitment into entrepreneurial teams, if nascent entrepreneurs follow the principle of interpersonal relations in team building. Although such teams will be well integrated, they may not make the best competitors on a global scale.

Strangers need not apply

Strangers – people not related by kinship or known to one another prior to the initial interactions around the founding of a new venture – constitute the most interesting potential team members. Rational process theories of entrepreneurial team functioning strongly imply that interpersonal considerations are secondary to instrumental ones. If industry experience and technical or managerial competence are critical to the success of a team, then we would expect lead entrepreneurs to search widely for qualified people, using existing bridges to go beyond local clusters or creating new bridges if none exist. Well-qualified strangers might even be preferred over less-qualified family, friends, and business associates.

Accordingly, perhaps the most striking finding from the PSED concerns the nearly complete absence of any strangers whatsoever among two person teams, and their rarity among three person teams. They were also extremely rare among all spouse/partner based
teams, with only 2 percent of such teams reporting any stranger ties. Only among the non spouse/partner based teams with 4 or 5 members, representing 18 percent of all the non spouse/partner teams, did we find a sizeable proportion of strangers. About half of the three and four person teams had at least one pair of strangers, and almost three-quarters of the five person teams did. Nonetheless, even in these large teams, most team members still knew each other prior to team formation. Clearly, these strangers carry the possibility of serving as bridging ties to other clusters. We suspect that these large teams, somewhat dependent upon people who were unknown to one another before forming the team, represent the kinds of more capital-intensive and growth-oriented teams that figure so prominently in the strategic literature on entrepreneurial teams.

The great majority of entrepreneurial teams emerge out of the local clusters described by small world networks but without the bridging ties necessary to reduce the social distance to strangers qualified for team membership. As such, we would expect them to be very stable, and follow-up studies over the subsequent three waves of the PSED bore out that expectation. Indeed, only 12 percent of the new ventures identified in the first wave experienced any changes in team composition over the four waves.

Unlike the creative teams assembled in increasingly institutionalized fields in the United States, as documented by Guimerà et al. (2005), most attempts at founding new ventures in the United States do not draw their members from a nationally-integrated pool of experts whose competence has been judged against agreed-upon standards. Strangers are rare, except for the largest teams, possibly hinting at a “competency discount” that founders extend to potential members whom they know and trust. Instead, almost all start-ups assemble teams based on embedded ties from pre-existing relations within local clusters. Perhaps founding team members use instrumental criteria mainly within networks of embedded ties. Apparently, bridging ties usually fail to bring in non-homophilous members. Most new ventures do not inhabit a “small world”.


5.7 How to promote the rational process model in a globalizing economy

I have noted that globalization has changed the demands upon entrepreneurs founding new ventures. Whereas they could formerly be content with simply copying past practices and recruiting team members through fairly closed networks, the new economic environment requires a more systematic search for members. At first it might seem difficult, if not impossible, to imagine how the transition from the social process to the rational process model could occur. Although research on entrepreneurial team formation shows that most apparently are the product of close ties within fragmented homophilous clusters, research on creative teams in the Broadway musical industry and in various academic disciplines, demonstrates that under the right conditions, the rational process model works. As more and more industries become exposed to global competition, pressures will increase to build teams whose diversity more accurately reflects the heterogeneity and turbulence in world markets.

The conditions promoting a universalistic and competence-driven formation process apparently take years if not decades to emerge, suggesting that only organizations, agencies, and institutions taking a long view have the capability to facilitate such a process. The social psychological model is firmly grounded in socio-cultural norms and practices whose force might be reduced but never eliminated. Nonetheless, it is still possible to imagine that universalistic and competence-based teambuilding role eventually dominate the process of new venture formation, given the strength of globalizing forces. Thus, I will focus my suggestions on a few modest proposals.

First, around the world, norms of universalism and competence can be promoted by educational systems and by professional associations. Professional organizations and trade associations within industries can generate and reinforce shared standards regarding how performance is evaluated. Many international organizations now promote global standards regarding performance assessment and national bodies should be encouraged to participate in the international agreements. As I noted, the examples I reviewed suggest that the process can take decades, and so time is of the essence.
Second, strong laws regarding antidiscrimination measures and regulatory policies promoting freedom of association and competition in labour markets might blunt, to some extent, the tendency for homophilous groups to engage in boundary-reinforcing tactics. For example, human rights organizations and labour rights organizations, at the international level, have argued strongly for rules and regulations protecting workers from unfair practices. Regional bodies, such as the European Union, are enacting labour market guidelines and practices that de facto privilege universalism and competence over parochialism and familiarity.

Third, new developments in information technology that have been facilitated by the Internet have created the possibility for universalistic searches unfettered by sociocultural barriers. For example, social networking sites such as LinkedIn carry the promise of enabling individuals to look beyond their immediate networks into the second and third level ties of people in their immediate network. Indeed, the multiplicative effect of working through indirect ties exemplified by such networks is staggering: within a path distance of only three steps, such sites provide access to tens of thousands of potential team members. It is now possible for new ventures in one nation to reach out and recruit the most competent team members from around the globe.

Implementing these suggestions will take time, but the payoff will be substantial. Governments have a stake in promoting universalistic norms within labour markets and supporting public institutions that allow people to change jobs freely and easily. Professional associations have a stake in providing their members with the tools and training they need to succeed in their careers, especially those in which becoming self-employed and starting new firms represents a typical career spell. Finally, entrepreneurs themselves can play a major role in promoting the conditions I have described as facilitating start-ups. Once they realized the market potential of technology that permits effective social networking, entrepreneurs rushed to take advantage of the opportunities. I suspect that networking technology will continue to improve, leading to the kinds of changes I described for the Broadway musical industry: larger teams, strengthened norms regarding universalism and competence in recruiting, and ultimately, more effective teams competing on a global scale.
5.8 References


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6.1 Introduction

As economic systems become more complex and specialized, export activity by firms of all ages and sizes contribute to national economic growth. The expansion of globalization increases the dependence of national growth on firm participation in international trade. While there is a substantial amount of information about the trading activity of the major multi-national firms, there is less information about new and smaller firms, which make up the majority of all businesses in every country.

The following analysis uses a recently developed international data base to explore several issues:

- How much cross-national variation exists in export activity among new and small firms?
- What factors are associated with this variation?
- Under what conditions are new and small firms more likely to participate in export activity?

Other research has show differences for firms at different stages in the life course (Reynolds, 2007). Nascent firms, those in development and not yet in full operation, appear to be somewhat different that established firm, those in business for over 42 months. New firms, operating businesses less than 42 months old, tend to be intermediate between nascent and established firms. For this reason, the following analyses will consider nascent, new, and established firms separately.
6.2 Data Sources

A cross national assessment of new and small business would require data with a number of important features. First, of course, would be data on samples of firms selected in the same way in all countries. Second, the procedures for acquiring the information should be harmonized for all cases. Third, it should include information on the relevant features of the new firms, such as the firm life course stage, economic sector, firm growth aspirations, anticipated impact on the markets, as well as the locations of the customers. Finally, it would be useful to have a diversity of countries, countries with quite different levels of economic development and different economic structures.

These desirable features are found in the Global Entrepreneurship Monitor data sets, data collected annually on a range of countries starting in 1998 (Reynolds, Bosma, Autio, et al, 2006; Reynolds and Hechavarria, 2007). Analysis will be confined to those years that include data on firm export activity, 2002 through 2004;13 a total of 43 countries are included.14

In each country a representative sample of adults was interviewed about activities as an owner involved in creating a new firm, a nascent enterprise, or as an owner-manager of an existing firm. The age of the existing firm, based on the date when salaries and wages were paid to the owners for more than three months, was used to distinguish between new and established firms. New firms are considered those paying wages and salaries up to 42 months, those with a longer history are considered established firms.

The major advantage of this procedure is that it is the same for all countries and independent of national data based on administrative data sets. Many countries develop national data sets based on administrative requirements, usually related to tax payments. But each country has a different procedure for identifying new entries into these data sets and gathers different information about their business population using different procedures. Cross-country comparisons are very difficult using such incompatible information. The GEM procedures harmonize both the identification of eligible cases and the data collection about each case.

13 Data for 1998 thru 2003 from Reynolds and Hechavarria (2007); data for 2004 from the project website, harmonized for consolidation with the prior years [www.gemconsortium.org].
14 Because of concern over the conduct of the interviews in Mexico, it was not including in most of the analysis, reducing the total count of countries to 43.
There are, to be sure, some disadvantages. For some countries the samples are relatively small, so some estimates are subject to considerable sampling error. Second, the businesses in the data sets do not represent the major multi-national firms, such as Toyota, Ericsson, British Petroleum, Microsoft, etc. While these giant firms are a small proportion, much less than 1%, of all businesses, they are a major source of international trade. Finally, this data set does not included data on either the annual sales (turnover) volume or the value added to the final product or service by these firms. Nonetheless, no other data set exists that will provide harmonized cross national data on the export activity of nascent, new and established firms across a range of economic sectors in a diversity of countries.

### 6.3 Export Emphasis

The export emphasis of nascent and existing firms is determined by a single item, presented as follows:

**What proportion of your customers [will] normally live outside your country?**

- More than 90%
- More than 75%
- More than 50%
- More than 25%
- More than 10%
- 10% or less
- None

For nascent firms, not yet able to cover salaries, the modifier “will” is included to represent the future expectations for the enterprise; reports from existing firms should represent the distribution of current customers. The wording “customers normally live” is included so that business serving those that visit from other countries can provide useful information. This might be a hotel in a destination resort with many guests from outside the country.

Responses to these items are used in different ways in different analyses. For example, the prevalence of export oriented enterprises may consider only those with 50% or more of their customers from outside the country; the focus of the following discussion. Later in
the assessment those firms with 25% or more external customers are the focus of analysis. Another option may be to consider the degree of export activity by assigning values to each of the categorical responses so they may be treated as a continuous variable: 95%, 83%, 63%, 38%, and so forth. If it is assumed that sales to all customers are equal – each customer purchases an identical amount of good or service – this will approximate the proportion of sales to those outside the country.

6.4 Prevalence of Export Oriented Enterprises

There is considerable variation among countries in terms of emphasis on export sales. The prevalence of export oriented

Figure 6.1 Prevalence of Export Oriented Establishments by Business Life Course Stage
enterprises for all three life course stages is presented in Figure 6.1. Each country is represented by a single bar, with the lowest segment representing nascent enterprises, the middle segment the new firms, and the top segment the established firms.\textsuperscript{15} The unit of analysis is the business enterprise, not individuals involved in ownership.\textsuperscript{16} The two character internet codes represent each country; they are listed in the Appendix.

The variation, as can be seen, is considerable, from 2.5 per 100 persons in Jordan (or one in every 40 adults) to 0.08 per 100 in Japan (or one in every 1,250 adults). As can be seen in Figure 6.1, there is some variation associated with different stages in the firm life course; for most countries the prevalence among new and established firms is greater than among nascent enterprises. This represents, among other things, the greater number of new and established enterprises.

A presentation of the prevalence of all nascent, new, and established firms for each country is provided in Figure 6.2, which is presented in four panels. Each country is represented by three bars: nascent enterprises by bars with a white base, new firms by bars with a light grey base, and established firms by bars with a dark grey base. Countries are presented, from left to right, as presented in Figure 6.1. For each type of business, the black segment of the top bar represents the prevalence of those engaged in export activity. Hence, the total amount of “black bars” is greatest for the three bars representing Jordan (JO) in the left side of first panel of Figure 6.2; it is the smallest for Japan (JP) on the right side of the fourth panel of Figure 6.2.

It is to be noted that some countries with low business prevalence rates, such as New Zealand (NZ), Ireland (IE) and Canada (CA) in the first panel, actually have a lot of “black” at their top of their bars. In contrast, some countries with rather high prevalence rates, such as Venezuela (VE) and Thailand (TH) in the fourth panel have a low prevalence of export oriented establishments; there is little black at the top of their bars. Hence, it is clear that there is a low correlation between the prevalence of all business establishments and the prevalence of export oriented businesses.

\textsuperscript{15} For these analyses, case weights for each country adjusted so the sample matches the most recent national data on the age and gender structure of the population and the average case weighs for each country adjusted to equal one.

\textsuperscript{16} The prevalence of individuals is adjusted by dividing by average owing team size to get estimates of the prevalence of establishments.
Figure 6.2 Enterprise Prevalence by Life Course Stage [1/4]

Figure 6.2 Enterprise Prevalence by Life Course Stage [2/4]
Figure 6.2 Enterprise Prevalence by Life Course Stage [3/4]

Figure 6.2 Enterprise Prevalence by Life Course Stage [4/4]
Several measures suggest that export orientation declines for firms that are in the latter stages of the firm life course. This can be seen by considering the proportion of enterprises that are emphasizing exports. The average across all countries is shown in Table 6.1; about 11.6% of nascent enterprises are export oriented; about 9.1% of new firms are export oriented, and about 7.7% of established enterprises.

Table 6.1 Proportion of Export Orientation Firms by Business Life Course Correlations

<table>
<thead>
<tr>
<th>(n = 43)</th>
<th>Average</th>
<th>Nascent Firms</th>
<th>New Firms</th>
<th>Established Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nascent Firms</td>
<td>11.6 %</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Firms</td>
<td>9.1 %</td>
<td>0.64</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Established Firms</td>
<td>7.7 %</td>
<td>0.66</td>
<td>0.83</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The interrelations among these three measures are presented in Table 5.1, which shows the correlations among the prevalence of export oriented enterprises for the different life course stages. The correlation between new and established firms is the highest at 0.83, between nascent and new firm it is 0.64 and between nascent and established firms it is 0.66. This suggests that nascent enterprises, or firms in creation, have a greater tendency to focus on customers outside the country. The emphasis among new and established firms is similar. This may reflect a change in emphasis among established firms – a decrease in international customers over the firm life course – or difference in opportunities available to the nascent enterprises now being created.
6.5 National factors affecting Export Orientation

Given that there are substantial differences in the presence of export oriented enterprises, what national characteristics might account for these differences? For a preliminary assessment, it is reasonable to consider several features: size of the domestic market, access to customers, structure of the economy, sophistication about global markets, and relative competitive advantage. The measures were chosen in part because approximate measures for both the developed and developing countries included in the data set were available.

The size of the domestic market is reflected in two measures. One is the size of the population; countries with more citizens represent a larger market. The other is the amount of money available to be spent, measured by the annual Gross Domestic Product per capita, adjusted to standardize purchasing power across countries (known as PPP). Population size estimates are available from a number of standardized sources for most countries of the world.\textsuperscript{17}

Ease of access to customers can be measured by the population density, the persons per square mile.\textsuperscript{18} This is not an ideal measure, for population densities can vary dramatically in larger countries. It is widely recognized that most people live in urban areas, even in countries with substantial geographic spread, like Australia, Canada, China, India, Russia, and the United States. Nonetheless, it is a reliable measure that reflects gross differences among countries.

The structure of the economy may also vary, given that the 43 countries represent a wide range in terms of the level of development. The relative emphasis given to agriculture, industry (manufacturing) and services is represented by the proportion of the workforce in each of these economic sectors. This provides an approximate measure of gross differences in national economic structure.\textsuperscript{19}

Assuming that those with more education will have a more sophisticated understanding of the world outside their own

\textsuperscript{17} Data on size of the national population and GDP adjusted for PPP was obtained from the latest World Economic Outlook estimates (April 2008).
\textsuperscript{19} Data on percentage of employment by these three sectors was taken from the 2007 World Development Indicators for the 2000-05 period.
countries, the proportion of the labour force with post high school educational experiences (which may vary from vocational or university experience to graduate training) was considered an indicator of greater knowledge and confidence about the outside world.20

The relative competitive advantage in each sector is represented by an index that represents relative productivity, again for agriculture, industry and service activity.21

The average and range of values on each of these measures is presented in Table 6.2.

---

**Table 6.2 Descriptions of National Measures of Export Activity and Selected Characteristics**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion nascent with 51%+ exports</td>
<td>11.7%</td>
<td>7.0%</td>
<td>0.2%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Proportion new firm with 51%+ exports</td>
<td>9.3%</td>
<td>6.2%</td>
<td>0.9%</td>
<td>26.1%</td>
</tr>
<tr>
<td>Proportion established firm with 51%+ exports</td>
<td>7.7%</td>
<td>5.5%</td>
<td>0.2%</td>
<td>25.4%</td>
</tr>
</tbody>
</table>

**Independent Variables**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population, all ages: 2003 (millions)</td>
<td>91.6</td>
</tr>
<tr>
<td>Population density, persons/sq mile: 2003</td>
<td>1,145</td>
</tr>
<tr>
<td>Per capita income, 2003 International Dollars [PPP Adj]</td>
<td>20,165</td>
</tr>
<tr>
<td>Proportion of work force with tertiary education</td>
<td>29%</td>
</tr>
<tr>
<td>Proportion labor force in agriculture</td>
<td>11.1%</td>
</tr>
<tr>
<td>Proportion labor force in industry (manufacturing)</td>
<td>24.2%</td>
</tr>
<tr>
<td>Proportion labor force in services</td>
<td>58.5%</td>
</tr>
<tr>
<td>Relative productivity in agriculture index</td>
<td>2,427</td>
</tr>
<tr>
<td>Relative productivity in industry (manufacturing) index</td>
<td>4,991</td>
</tr>
<tr>
<td>Relative productivity in services index</td>
<td>4,514</td>
</tr>
</tbody>
</table>

---

20 The most recent data was obtained form the World Development Indicators, with data taken from the GEM adult population survey on educational attainment for missing countries, including Brazil, Chile, China, India, Jordan, Taiwan, Thailand, and Uganda. Venezuela was assumed to be the average of Peru and Panama.

21 Taken from the World Economic Outlook Database for 2001.
For some factors there is considerable range, population density varies from 7 to 18,887 persons per square mile. The proportion of the labour force in agriculture varies from 0.3% to over 60%. The productivity index for services varies from 912 to 7,281. The proportion of the labour force with tertiary (post high school) educational attainment varies from 8 to 61%. And annual GDP per capita varies from $765 to $42,757.

These factors are used in regression models to predict the variation in export activity for different stages in the firm life course. The results are presented in Table 6.3.

It is clear from this assessment that the size of the domestic market has a major impact on the proportion of firms engaged in export activity; the greater the national market the fewer firms that pursue customers outside the country. The density of the national market has the opposite effect; those firms in more dense countries are more likely to export. This may be due to the nature of these high density countries, such as Singapore, Hong Kong, and

<table>
<thead>
<tr>
<th>Table 6.3 Regression Models Predicting Prevalence of Exporting Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of Export Oriented</td>
</tr>
<tr>
<td>Explained variance</td>
</tr>
<tr>
<td>Standard Beta Weights</td>
</tr>
<tr>
<td>Total population (Log10)</td>
</tr>
<tr>
<td>Population density (Log10)</td>
</tr>
<tr>
<td>Annual GDP per capita, 2003, PPP adjusted</td>
</tr>
<tr>
<td>Per cent labor force with tertiary education</td>
</tr>
<tr>
<td>Proportion labor force in services</td>
</tr>
<tr>
<td>Agriculture Sector Productivity Index</td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td>F-Test stat sign</td>
</tr>
<tr>
<td>Mexico excluded, total n=43.</td>
</tr>
<tr>
<td>Standard errors in parentheses</td>
</tr>
<tr>
<td>SPSS Windows 15, Stepwise, PIN (0.10); POUT (0.20); CIN (90)</td>
</tr>
</tbody>
</table>
Belgium; advanced countries with highly developed export activity. A national emphasis on services seems to increase exports among established firms. A lower level of agriculture sector productivity seems to increase export activity among nascent enterprises. Despite differences in industry (manufacturing) productivity, the variation in the proportion of employment in the industry sector is lower than other sectors, which may account for the lack of impact on export activity.

The major conclusions from this assessment are as follows:

- The proportions of nascent, new, and established firms that are oriented toward export markets are relatively small, less than 12% of the nascent, 9% of the new firms, and less than 8% of established firms.

- Simple linear models predicting the prevalence of export oriented establishments are moderately successful, explaining from over one third to one half of the variation among countries.

- The major factor affecting the prevalence of an export orientation is the size of the domestic market; in larger countries there is much less of an export orientation.

- New and established firms in counties with higher population densities are more likely to be involved in export activity.

- A variety of different factors affect firms in the different life course stages:
  - higher per capita income and lower agriculture sector productivity is associated with greater exports among nascent firms;
  - higher levels of tertiary education among the work force are associated with more exports among new firms
  - a greater proportion of the labour force in services is associated with more exports among established firms.

Variation in emphasis in manufacturing seems to have little effect on the level of export activity.

The next issue to pursue is to explore the characteristics of those individual nascent, new, and established firms that appear to emphasize export activity.
6.6 Establishments and Export Orientation

Exploring those factors that affect the tendency of individual establishments to pursue sales to international customers can best be pursued by adjusting the dependent variable. In this case, exporting activity is represented by the proportion of international customers reported by individual nascent, new, and established enterprises. The distribution for all establishments in the sample is presented in Figure 6.3. This indicates that the vast majority, from 78% of nascent enterprises to 86% of established enterprises, report no sales to international customers. About 2% in each business life course stage report that 90% or more of their customers are outside their country.

Figure 6.3 Emphasis on Internal Exports among Nascent, New and Established Enterprises
Across the bottom axis of Figure 4.3 are the values used in the regression analysis to represent the proportion of international customers. A value of 1% is given to all those that report no international customers so that a Log10 transformation can be computed for the dependent variable; this provides a more normal distribution that is consistent with the assumptions of the regression analysis procedures.

The regression models incorporate a number of variables related to the nascent entrepreneur or business owner reporting for the enterprise, including gender, age, educational attainment, household income relative to others in the same country, and whether or not they are working, and contextual motivation, opportunity or necessity. Several variables are related to the nature of the business activity, including the industry sector in four broad categories (extractive, transformative, business services, and consumer services)\(^{22}\), growth expectations for the venture, and whether or not the business is expected to create innovations in the markets by providing new goods or services. Variables related to the national context include the size of the domestic market, population density, the gross domestic product per capita for 2003, the proportion of the work force with tertiary (post high school) education, and the proportion of the national work force in agriculture, industry, or services.

The results of the analysis for all firms in the sample from 43 countries are presented in Table 6.4. While the models for nascent, new and established enterprises are all statistically significant, using the standard F-test, the explained variance is quite low; from 6% to 11% of the variation in sales to international customers are accounted for by the variables in these models. Nine factors have a statistically significant and similar impact in all three linear models. Three have a similar statistically significant impact in two of the three models.

\(^{22}\text{Extraction includes farming, fishing, forestry, and mining. Transformative includes construction, manufacturing, transportation, communication, utilities and wholesale. Business services includes financial, insurance, real estate and all business services. Consumer services includes all repair, retail, hotels, restaurants and bars, health, education, and social services, entertainment, recreation, personal services and all business activity where private individuals are the customers.}\)
This alone suggests that the factors affecting export sales are similar across the three life course stages.

- Major individual factors affecting greater export sales include being a male, education beyond high school, and a household income that is above average for the country.

- Businesses with a greater export emphasis tend to be managed by teams, expect to have a major impact on the markets, and have growth expectations; export oriented new and established firms tend to be in an extractive sector (farming, mining, forestry).

- Five national characteristics are associated with greater export sales, a smaller country, a higher population density, and a higher annual GDP per capita. A reduction in the labour force working in agriculture and services increases the tendency to have exports. As the only other employment sector is industry (manufacturing), a greater emphasis in industry employment seems to increase the tendency to export.

This consistency suggests that nascent entrepreneurs and owners of existing businesses are responding to the same influences they as develop customers for their businesses.
Table 6.4 Regression Models Predicting International Customer Proportions, All countries

<table>
<thead>
<tr>
<th>Proportion of International Customers</th>
<th>Nascent</th>
<th>New</th>
<th>Estab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Cases</td>
<td>9,858</td>
<td>10,222</td>
<td>19,946</td>
</tr>
<tr>
<td>Explained variance (R**2)</td>
<td>11% (0.72)</td>
<td>9% (0.66)</td>
<td>6% (0.65)</td>
</tr>
<tr>
<td>Standard Beta Weights</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (Male = 1)</td>
<td>0.04 (0.02)</td>
<td>0.03 (0.01)</td>
<td></td>
</tr>
<tr>
<td>25 to 34 years old (= 1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 to 44 years old (= 1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 to 54 years old (= 1)</td>
<td>0.03 (0.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary school graduate (= 1)</td>
<td>0.04 (0.02)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education beyond secondary school (=1)</td>
<td>0.05 (0.02)</td>
<td>0.06 (0.01)</td>
<td></td>
</tr>
<tr>
<td>Relative income in country (upper, median, lower third)</td>
<td>0.04 (0.00)</td>
<td>0.04 (0.00)</td>
<td></td>
</tr>
<tr>
<td>Working on other job at time of interview (=1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size of start-up team</td>
<td>0.06 (0.01)</td>
<td>0.06 (0.01)</td>
<td>0.05 (0.01)</td>
</tr>
<tr>
<td>Growth oriented (Expect 20+ jobs in five years = 1)</td>
<td>0.15 (0.03)</td>
<td>0.09 (0.03)</td>
<td>0.07 (0.02)</td>
</tr>
<tr>
<td>Expect to have major impact on markets (= 1)</td>
<td>0.06 (0.03)</td>
<td>0.04 (0.03)</td>
<td>0.03 (0.02)</td>
</tr>
<tr>
<td>Extractive sector (Agr, mining = 1)</td>
<td></td>
<td>0.03 (0.04)</td>
<td>0.05 (0.02)</td>
</tr>
<tr>
<td>Transformative sector (manuf, const = 1)</td>
<td>0.04 (0.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer service sectors (= 1)</td>
<td>-0.04 (0.02)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total national population (Log10)</td>
<td>-0.13 (0.02)</td>
<td>-0.15 (0.01)</td>
<td>-0.14 (0.01)</td>
</tr>
<tr>
<td>Population density (Log10, persons per square mile)</td>
<td>0.05 (0.02)</td>
<td>0.12 (0.01)</td>
<td>0.09 (0.01)</td>
</tr>
<tr>
<td>Annual GDP per capita, 2003, PPP adjusted</td>
<td>0.13 (0.00)</td>
<td>0.10 (0.00)</td>
<td>0.06 (0.00)</td>
</tr>
<tr>
<td>Percent labor force with tertiary education</td>
<td>-0.07 (0.00)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion labor force in agriculture</td>
<td>-0.17 (0.00)</td>
<td>-0.16 (0.00)</td>
<td>-0.10 (0.00)</td>
</tr>
<tr>
<td>Proportion labor force in services</td>
<td>-0.15 (0.00)</td>
<td>-0.15 (0.00)</td>
<td>-0.09 (0.00)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.76 (0.16)</td>
<td>1.48 (0.14)</td>
<td>1.31 (0.11)</td>
</tr>
<tr>
<td>F-Test stat sign</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Log10 of proportion of international customers; weights re-centered for each country. Criteria are standard SPSS V 15.0 defaults; Standard errors provided in parentheses.
The same analysis is repeated for a single country, Sweden, and the results presented in Table 6.5. In this case, all the national characteristics are constant for the firms in this sample. The results are somewhat mixed, as the model is able to account for 14% of the variation in international customers among nascent enterprises but only 4% for new businesses and 9% for established businesses. In this analysis only the expected firm growth has a significant impact for firms in all three life course stages; growth aspirations is associated with more international customers. Education beyond secondary

Table 6.5 Regression Models Predicting International Customer Proportions, Sweden

<table>
<thead>
<tr>
<th>Proportion of International Customers</th>
<th>Nascent</th>
<th>New</th>
<th>Estab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Cases</td>
<td>373</td>
<td>537</td>
<td>1,343</td>
</tr>
<tr>
<td>Explained variance (R**2)</td>
<td>14 % (0.13)</td>
<td>4 % (0.65)</td>
<td>9 % (0.55)</td>
</tr>
<tr>
<td>Standard Beta Weights</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (male = 1)</td>
<td>-.11 (0.07)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 to 54 years old (= 1)</td>
<td></td>
<td>-.07 (0.04)</td>
<td></td>
</tr>
<tr>
<td>Secondary school graduate (= 1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education beyond secondary school (=1)</td>
<td>0.13 (0.09)</td>
<td>0.22 (0.04)</td>
<td></td>
</tr>
<tr>
<td>Size of start-up team</td>
<td></td>
<td></td>
<td>0.14 (0.01)</td>
</tr>
<tr>
<td>Growth oriented (Expect 20+ jobs in five years = 1)</td>
<td>0.16 (0.14)</td>
<td>0.18 (0.10)</td>
<td>0.06 (0.07)</td>
</tr>
<tr>
<td>Expect innovative impact (= 1)</td>
<td>0.23 (0.11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transformative sectors (manuf, const = 1)</td>
<td>0.18 (0.10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer services sectors (Retail, restaurants = 1)</td>
<td></td>
<td>0.6 (0.04)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.16 (0.06)</td>
<td>0.41 (0.06)</td>
<td>0.07 (0.03)</td>
</tr>
<tr>
<td>F-Test stat sign</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Log10 of proportion of international customers; weights re-centered for each country. Criteria are standard SPSS V 15.0 defaults; Standard errors provided in parentheses.
programs, that is a university or college degree, is associated with more international customers among nascent and established businesses.

Among Swedish nascent enterprises, those that expect to provide innovations in the market place as well as operate in transformative sectors, which include manufacturing, have a greater proportion of international customers.

These types of regression analyses are widely used to explore multi-variate phenomena, where a number of factors are considered to have an impact on a dependent variable. While the large sample sizes in these analyses leads to models with a statistically significant fit to the data, the level of success is, at best, modest. In the best of the six models discussed above, the procedure leaves 86% of the variation in expected sales to international customers by nascent enterprises was unexplained; in the worst case 96% of new Swedish firm export activity is “unexplained”. The levels of influence of different independent variables are no more than suggestive, leading to other strategies for analysis.

6.7 Identifying Context, Characteristics of Export Oriented Firms

What are the characteristics of the situation and business enterprise that are associated with a tendency to pursue customers outside the country? Another analysis procedure, a decision tree analysis, has been developed that provides an answer to this question. This procedure is designed to consider distinctive features of the situation and the unit of analysis and identify combinations of variables associated with a unique status, such as emphasizing export sales. The regression models discussed in the previous section help to identify factors that may influence a change in the proportion of exports associated with a given business. The decision tree procedures identify combinations of factors that are associated with a change in disposition, from a “non-exporting” firm to an “exporting” firm.23

23 The procedure employed is the DTREG modeling procedure. Sherrod, Phillip H. (2005) DTREG: Classification and Regression Trees for Data Mining and Modeling [www.dtreg.com]. The full trees are developed but restricted to no more than five levels of analysis and 10 final groups.
For this analysis, the nascent, new and established businesses are considered to be export oriented if 25% or more of their customers normally reside outside the country. The same variables used in the previous procedure are including in the analysis. For simplicity, only the first four characteristics associated with defining these groups are included in this discussion. The primary result is a description of a group of enterprises with similar levels of export orientation. The descriptions involve characteristics of the context as well as the firm itself.

Table 6.6 presents the results associated with export orientations among nascent firms placed in nine groups, ranked in terms of the proportion that are export oriented.

Table 6.6 National Context, Characteristics of Export

<table>
<thead>
<tr>
<th>Group</th>
<th>GDP PC</th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
<th>Level Four</th>
<th>Prop Export Oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>&lt;= $9,256</td>
<td>High Growth Firm</td>
<td></td>
<td></td>
<td></td>
<td>26.04%</td>
</tr>
<tr>
<td>B</td>
<td>&gt; $9,256</td>
<td>Agric &lt; 4 % workers</td>
<td>Indus &lt;14% workers</td>
<td></td>
<td></td>
<td>23.26%</td>
</tr>
<tr>
<td>C</td>
<td>&gt; $9,256</td>
<td>Low Growth Firm</td>
<td></td>
<td>Pop Den &gt; 872/sq mi</td>
<td></td>
<td>22.17%</td>
</tr>
<tr>
<td>D</td>
<td>&lt;= $9,256</td>
<td>Agric &gt; 4 % workers</td>
<td></td>
<td>High Growth Firm</td>
<td></td>
<td>15.64%</td>
</tr>
<tr>
<td>E</td>
<td>&gt; $9,256</td>
<td>Low Growth Firm</td>
<td></td>
<td>Pop Den &lt;= 872/sq mi</td>
<td>Nat pop under 5.3 mill</td>
<td>15.52%</td>
</tr>
<tr>
<td>F</td>
<td>&gt; $9,256</td>
<td>Low Growth Firm</td>
<td></td>
<td>Pop Den &lt;= 872/sq mi</td>
<td>Nat pop 5.3 mill up</td>
<td>9.14%</td>
</tr>
<tr>
<td>G</td>
<td>&lt;= $9,256</td>
<td>Agric &lt; 4 % workers</td>
<td></td>
<td>Indus &gt;14% workers</td>
<td></td>
<td>7.57%</td>
</tr>
<tr>
<td>H</td>
<td>&lt;= $9,256</td>
<td>Agric &gt; 4 % workers</td>
<td></td>
<td>Low Growth Firm</td>
<td>Nat pop under 73 mill</td>
<td>3.52%</td>
</tr>
<tr>
<td>I</td>
<td>&lt;= $9,256</td>
<td>Agric &gt; 4 % workers</td>
<td></td>
<td>Low Growth Firm</td>
<td>Nat pop 73 mill up</td>
<td>0.23%</td>
</tr>
</tbody>
</table>

Countries in each group (see Appendix A for codes).

A AU, BE, CA, CL, DE, DK, ES, FI, FR, GR, HK, HR, HU, IE, IL, IS, IT, JP, KR, NL, NO, NZ, PL, PT, RU, SI, SE, SG, SW, TW, UK, US.
B ZA.
C BE, HK, JP, KR, NL, SG, TW.
D BR, CH, IN, PE, TH, UG, VE.
E FI, HR, IE, IS, NO, NZ, SI.
F AU, CA, CL, DE, DK, ES, FR, GR, HU, IL, IT, PL, PT, RU, SE, SW, UK, US.
G AR, EC, JO.
H PE, TH, UG, VE.
I BR, CH, IN.
The first group, A, consists of nascent enterprises in countries with a gross domestic product per capita in excess of $9,256 per year and reporting they expect the firm to have a high growth trajectory. Over one quarter (26.04%) of the nascent enterprises in this group expect over 25% of their sales to be to customers living outside their country. This group includes nascent enterprises in 32 countries in the sample, identified at the bottom of Table 5.6 by their internet access code (SE for Sweden). At the opposite extreme are those in Group I, which includes countries with low annual GDP, more than 4% of the labour force in agriculture, with a low growth orientation, and a national population greater than 73 million; these nascent enterprises are found in three countries – Brazil, China, and India – and only 0.23% of these nascent enterprises have an export orientation. A much larger proportion of export oriented nascent enterprises (3.52%) are found in similar but smaller countries associated with group H – Peru, Thailand, Uganda, and Venezuela.

Both national context and growth aspirations play a major role among nascent firms.

The same analysis among new firms is presented in Table 5.7 and established firms in Table 4.8. In both cases there is much less diversity in the proportion of export orientations, from 0.30% to 10.46% for new firms and 0.44% to 13.97% among established firms. In both cases, the size of the national population is the most critical factor; those countries with populations fewer than 105 million tend to have more export oriented new and established firms.

Among the new firms, presented in Table 6.7, the major national factors affecting the export orientation are measures of the total size of the country, presented in the level one column, and national wealth, presented in the level two column. There is more export activity if the new firm is in a country with higher levels of annual GDP per capita, reflecting a more sophisticated economic structure. The primary feature associated with the enterprise itself is the relative level of household income reported by the business owner. Higher levels of household income are associated with greater export activity in the level two columns. This higher household income may represent those with more education and information about external markets or greater resources to support expansions into markets outside the country.

Among established firms, presented in Table 6.8, a slightly different set of factors are associated with groups with different levels of export activity. After the national population size, found
in the level one column, a national emphasis on manufacturing, an orientation toward firm growth, firms not in the consumer service sector, and the level of education of the owner all seem to have an effect. Group A indicates that 14% of growth oriented firms in 16 countries with a population between 18 and 105 million persons are export oriented. In contrast, Group C indicates that 10% of the established firms in countries with a population greater than 105 million but over 18% of the work force in industry (manufacturing) that are not in consumer services and with growth expectations are export oriented. In contrast, Group I includes two countries with large populations but less than 18% of the work force in industry and 0.44% are export oriented.

These analyses provide a greater range in export orientation when more levels in the decision tree are explored. This implies that it is a combination of factors – many associated with the country in which the firm is established, that affect the tendency to export goods and services.

### Table 6.7 National Context, Characteristics of Export Oriented New Firms

<table>
<thead>
<tr>
<th>Group</th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
<th>Level Four</th>
<th>Prop Export Oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Nat pop under 105 mill</td>
<td>GDP Per Capita &gt; $ 9.3K</td>
<td></td>
<td></td>
<td>10.46%</td>
</tr>
<tr>
<td>B</td>
<td>Nat pop under 105 mill</td>
<td>GDP Per Capita &lt; $ 9.3K</td>
<td>HH Inc.: Upper 1/3 rds</td>
<td>Nat pop under 15 mill</td>
<td>7.97%</td>
</tr>
<tr>
<td>C</td>
<td>Nat pop under 105 mill</td>
<td>GDP Per Capita &lt; $ 9.3K</td>
<td>HH Inc.: Lower 2/3 rds</td>
<td>Nat pop over 15 mill</td>
<td>5.07%</td>
</tr>
<tr>
<td>D</td>
<td>Nat pop over 105 mill</td>
<td>HH Inc.: Upper 2/3 rds</td>
<td>HH Inc.: Upper 1/3 rds</td>
<td>Nat pop over 236 mill</td>
<td>3.98%</td>
</tr>
<tr>
<td>E</td>
<td>Nat pop over 105 mill</td>
<td>HH Inc.: Upper 2/3 rds</td>
<td>HH Inc.: Middle 1/3 rds</td>
<td>Nat pop over 15 mill</td>
<td>2.82%</td>
</tr>
<tr>
<td>F</td>
<td>Nat pop over 105 mill</td>
<td>GDP Per Capita &lt; $ 9.3K</td>
<td>HH Inc.: Lower 2/3 rds</td>
<td>Nat pop over 236 mill</td>
<td>0.42%</td>
</tr>
<tr>
<td>G</td>
<td>Nat pop over 105 mill</td>
<td>HH Inc.: Lower 1/3 rds</td>
<td></td>
<td>Nat pop under 236 mill</td>
<td>0.30%</td>
</tr>
<tr>
<td>H</td>
<td>Nat pop over 105 mill</td>
<td>HH Inc.: Upper 2/3 rds</td>
<td>HH Inc.: Middle 1/3 rds</td>
<td>Nat pop over 236 mill</td>
<td>0.30%</td>
</tr>
</tbody>
</table>

Countries in each group (see Appendix A for codes).

- **A**: AU, BE, CA, CL, DE, DK, ES, FI, FR, GR, HK, HR, HU, IE, IL, IT, IS, KR, NL, NO, NZ, PL, PT, SE, SG, SI, SW, TW, UK.
- **B**: AR, EC, JO, PE, TH, UG, VE, ZA.
- **C**: EC, JO.
- **D**: BR, CH, IN, JP, RU, US.
- **E**: CH, IN, US.
- **F**: AR, PE, TH, UG, VE, ZA.
- **G**: BR, CH, IN, JP, RU, US.
- **H**: BR, JP, RU.
6.8 Export Orientations among Swedish Firms

Generally speaking, Swedish firms are in the groups with the highest proportion of export oriented firms in the 43 country assessment. The assessment of nascent firms presented in Table 5.6 finds Swedish firms placed in two groups. The first are firms in the high national per capita income and high firm growth aspiration category, Group A, where 26% are export oriented. Swedish firms are also found in the high national per capita income with low firm growth aspirations in countries with low population density and moderate size; about 9% of Group F firms are export oriented. Among new firms, presented in Table 6.7, Swedish firms are included in the group of smaller countries with a high national per capita income; about 10% of these new firms in Group A are export oriented. In the assessment of established firms presented in Table 6.8 Sweden firms are included among countries with populations of less than 18 million; about 11% of these Group B firms are export oriented.

Table 6.8 National Context, Characteristics of Export Oriented Established Firms

<table>
<thead>
<tr>
<th>Group</th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
<th>Level Four</th>
<th>Prop Export Oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Nat pop under 105 mill</td>
<td>Nat pop over 18 mill</td>
<td>Hi Growth Oriented</td>
<td></td>
<td>13.97%</td>
</tr>
<tr>
<td>B</td>
<td>Nat pop under 105 mill</td>
<td>Nat pop under 18 mill</td>
<td></td>
<td></td>
<td>11.00%</td>
</tr>
<tr>
<td>C</td>
<td>Nat pop over 105 mill</td>
<td>Industry &gt; 18 % workers</td>
<td>Not consumer services</td>
<td>Hi Growth Oriented</td>
<td>10.25%</td>
</tr>
<tr>
<td>D</td>
<td>Nat pop over 105 mill</td>
<td>Nat pop over 18 mill</td>
<td>Lo Growth Oriented</td>
<td>Post HS Educ</td>
<td>8.13%</td>
</tr>
<tr>
<td>E</td>
<td>Nat pop over 105 mill</td>
<td>Nat pop over 18 mill</td>
<td>Lo Growth Oriented</td>
<td>Educ up to HS</td>
<td>5.09%</td>
</tr>
<tr>
<td>F</td>
<td>Nat pop over 105 mill</td>
<td>Industry &gt; 18 % workers</td>
<td>Not consumer services</td>
<td>Lo Growth Oriented</td>
<td>3.60%</td>
</tr>
<tr>
<td>G</td>
<td>Nat pop over 105 mill</td>
<td>Industry &lt;= 18 % workers</td>
<td>Consumer services</td>
<td></td>
<td>1.55%</td>
</tr>
<tr>
<td>H</td>
<td>Nat pop over 105 mill</td>
<td>Industry &lt;= 18 % workers</td>
<td></td>
<td></td>
<td>0.44%</td>
</tr>
</tbody>
</table>

Countries in each group (See appendix A for codes).

A  AU, AR, CA, DK, ES, FR, IT, KR, PE, PL, TH, TW, UG, UK, VE, ZA.
B  CL, DE, DK, FI, GR, HK, HR, HU, JE, IL, IS, JO, NL, NO, NZ, PT, SE, SI, SG, SW, ..
C  CH, JP, RU, US.
D  AU, AR, CA, DK, ES, FR, IT, KR, PE, PL, TH, TW, UG, UK, VE, ZA.
E  AU, AR, CA, DK, ES, FR, IT, KR, PE, PL, TH, TW, UG, UK, VE, ZA.
F  CH, JP, RU, US.
G  CH, JP, RU, US.
H  BR, IN.
More precision about the export orientation of Swedish firms is provided with a similar analysis of only Swedish firms, provided in Tables 6.9, 6.10 and 6.11. As the focus is on a single country, all factors associated with unique characteristics of Sweden are constant and not included in the analysis. This shifts the focus to the nature of the firm itself and the person completing the interview as a representative of the start-up team. In addition, the Swedish samples are weighted to represent the entire population of each type of enterprise in the country, so that the groups providing the greatest proportion of export oriented firms can be identified.

For example, consider Group A in Table 6.9. This group consists of nascent firms not in the consumer service sector, that is to say they are in extractive, transformative (construction, manufacturing, transportation, utilities, or wholesale) or business service sectors, with an owner with college or graduate education and motivated by taking advantage of a business opportunity. They are 40% of all nascent firms in Sweden but 90% of the nascent firms with an export orientation. The other 6 groups, where export orientation varies from 12% to 0% of the nascent enterprises, include only 10% of the export oriented nascent firms in Sweden.

There is more diversity among the groups of export oriented new firms in Sweden, presented in Table 6.10. Here three groups account for 90% of the export oriented new firms. Group A is a very

---

**Table 6.9 Characteristics of Export Oriented Nascent Firms: Sweden**

<table>
<thead>
<tr>
<th>Group</th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
<th>Level Four</th>
<th>Prop Export Oriented</th>
<th>Prop Sample</th>
<th>Prop All Export Oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Not consumer</td>
<td>Educ: HS and more</td>
<td>Opportunity motivation</td>
<td>23.1%</td>
<td>40.6%</td>
<td>89.6%</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Not consumer</td>
<td>Educ: Not HS Grad</td>
<td>Not working</td>
<td>11.9%</td>
<td>4.2%</td>
<td>4.8%</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Consumer Services</td>
<td>Start-up team 4+</td>
<td></td>
<td>8.7%</td>
<td>3.8%</td>
<td>3.2%</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Consumer Services</td>
<td>Start-up team 1-3</td>
<td>Age: 25-34 Yrs old</td>
<td>1.4%</td>
<td>10.8%</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Not consumer</td>
<td>Educ: Not HS Grad</td>
<td>Working</td>
<td>0.6%</td>
<td>16.1%</td>
<td>0.9%</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Not consumer</td>
<td>Educ: HS and more</td>
<td>Necessity motivation</td>
<td>0.0%</td>
<td>4.2%</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Consumer Services</td>
<td>Start-up team 1-3</td>
<td>Age: Not 25-34 Yrs old</td>
<td>0.0%</td>
<td>20.3%</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>N=288</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>
small proportion, 5%, of all new firms and consist of those in the extractive sector with household incomes in the upper two-thirds for the country and where the respondent is a women (either the owner or partner of the owner); they are, however, 28% of all new export oriented firms. Group B are new firms where the owning respondent is from a household in the upper two-thirds in terms of annual income but they are in the business service sector. This group is 18% of the Swedish new firms but 30% of those with an export orientation. Group D are firms where the responding owners are in the upper two-thirds of household income and in all other sectors, transformative and consumer services. They are 44% of all new firms in Sweden and account for 29% of the export oriented new firms.

Two groups account for 88% of the export oriented established firms in Sweden, as shown in Table 6.11. Perhaps most distinctive are those owned and managed by three or more persons, Group A. These are 19% of all Swedish established firms, but account for 46% of the firms with an export orientation. The other major source are those represented by Group D, those established firms owned by 1 or 2 persons, with household income in the upper 1/3rd for Sweden and the responding principal is not 45-54 years old or 25-34 years old; this group is dominated by those 35-44 years of age. Group D is 24% of Swedish established firms but the source of 32% of the established firms with an export orientation.

<table>
<thead>
<tr>
<th>Group</th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
<th>Level Four</th>
<th>Prop Export Oriented</th>
<th>Prop Sample</th>
<th>Prop All Export Oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>HH Inc: Upper 2/3 rds</td>
<td>Extractive sector</td>
<td>Owner: Female</td>
<td>44.3%</td>
<td>4.6%</td>
<td>28.1%</td>
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</tr>
<tr>
<td>B</td>
<td>HH Inc: Upper 2/3 rds</td>
<td>Not extractive sector</td>
<td>Buss service sector</td>
<td>11.7%</td>
<td>18.4%</td>
<td>29.8%</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>HH Inc: Lower 1/3 rd</td>
<td>Opportunity motivation</td>
<td></td>
<td>8.6%</td>
<td>3.9%</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>HH Inc: Upper 2/3 rds</td>
<td>Not extractive sector</td>
<td>Not buss service sector</td>
<td>4.9%</td>
<td>43.5%</td>
<td>29.3%</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>HH Inc: Upper 2/3 rds</td>
<td>Extractive sector</td>
<td>Owner: Male</td>
<td>4.6%</td>
<td>10.7%</td>
<td>6.8%</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>HH Inc: Lower 1/3 rd</td>
<td>Necessity motivation</td>
<td>Transformative sector</td>
<td>1.7%</td>
<td>5.5%</td>
<td>1.2%</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>HH Inc: Lower 1/3 rd</td>
<td>Necessity motivation</td>
<td>Not transformative sector</td>
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<td>13.3%</td>
<td>0.0%</td>
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<tr>
<td>N=457</td>
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<td></td>
<td></td>
<td>100.0%</td>
<td>100.0%</td>
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</table>
This assessment suggests that different combinations of factors are associated with an export orientation at different business life course stages among Swedish firms.

- Among nascent firms the sector, education of the owners, and motivation for pursuing a new firm are most critical.

- Among new firms it is the level of household income of the owners and the economic sector in which the firm is operating that are important.

- Among established firms it is the size of the ownership team and the household income of the owners that are most highly related to an export orientation.

This suggests that it is of some value to consider the business life course in assessing the export orientation among Swedish firms. With a larger sample a more precise description would be possible.

### Table 6.11 Characteristics of Export Oriented Established Firms: Sweden

<table>
<thead>
<tr>
<th>Group</th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
<th>Level Four</th>
<th>Prop Export Oriented</th>
<th>Prop Sample</th>
<th>Prop All Export Oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Owner team 1-2</td>
<td>HH Inc: Lower 2/3 rds</td>
<td>Not working</td>
<td></td>
<td>25.9%</td>
<td>1.6%</td>
<td>6.5%</td>
</tr>
<tr>
<td>B</td>
<td>Owner Team 3+</td>
<td></td>
<td></td>
<td></td>
<td>16.0%</td>
<td>18.7%</td>
<td>46.3%</td>
</tr>
<tr>
<td>C</td>
<td>Owner team 1-2</td>
<td>HH Inc: Upper 1/3 rd</td>
<td>Age: 45-54 yrs old</td>
<td>Consumer service sector</td>
<td>9.8%</td>
<td>2.6%</td>
<td>4.0%</td>
</tr>
<tr>
<td>D</td>
<td>Owner team 1-2</td>
<td>HH Inc: Upper 1/3 rd</td>
<td>Age: Not 45-54 yrs old</td>
<td>Age: Not 25-34 yrs old</td>
<td>8.6%</td>
<td>23.7%</td>
<td>31.6%</td>
</tr>
<tr>
<td>E</td>
<td>Owner team 1-2</td>
<td>HH Inc: Lower 2/3 rds</td>
<td>Working full-, part-time</td>
<td>HS Graduate</td>
<td>4.4%</td>
<td>10.2%</td>
<td>6.8%</td>
</tr>
<tr>
<td>F</td>
<td>Owner team 1-2</td>
<td>HH Inc: Lower 2/3 rds</td>
<td>Working full-, part-time</td>
<td>Not HS graduate</td>
<td>1.9%</td>
<td>31.6%</td>
<td>9.1%</td>
</tr>
<tr>
<td>G</td>
<td>Owner team 1-2</td>
<td>HH Inc: Upper 1/3 rd</td>
<td>Age: 45-54 yrs old</td>
<td>Not consumer service</td>
<td>1.3%</td>
<td>10.2%</td>
<td>2.1%</td>
</tr>
<tr>
<td>H</td>
<td>Owner team 1-2</td>
<td>HH Inc: Upper 1/3 rd</td>
<td>Age: Not 45-54 yrs old</td>
<td>Age: 25-34 yrs old</td>
<td>0.4%</td>
<td>3.0%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

N=1,189.
6.9 Overview and Conclusion

New and smaller firms are the vast majority of the businesses in all countries. They are in a position to make a major contribution to national exports and assist their countries integration into the global economy. The GEM data base allows the opportunity to explore the prevalence and nature of nascent, new and established firms that focus on customers outside their country. It was found that about one in ten enterprises—nascent, new, or established—reports that more than 50% of their customers are international.

There is, however, substantial variation. The analysis employed included measures of national characteristics, characteristics of the entrepreneur-owner, and characteristics of the enterprise, including the stage in the business life course—nascent, new or established. Comparison of country level measures was completed using regression analysis to develop linear additive models. Two procedures were employed to explore the unique features of firms involved in export activity.

The results suggested the most important influences were as follows:

- National characteristics had the most pervasive and significant influence. There was more export activity among smaller countries and those with higher population densities. Those with higher per capita income seemed to have more export activity, perhaps reflecting a more sophisticated economy. A relative national emphasis on manufacturing may also contribute to more export activity in all economic sectors.

- Next in significance seemed to be the character of the business enterprise. Those with larger start-ups teams, a growth orientation, and expecting to have an innovative impact on the markets were more likely to be engaged in exports.

- The stage in the business life course seemed to have some effect, nascent firms were more export oriented than new firms, and new firms were more export oriented than established firms, but the major factors affecting firms in each life course stage were similar. This may reflect the changing emphasis of firms over the life course.
or different business opportunities being pursued by nascent and new firms, opportunities not present when established firms were in development.

The decision tree analysis made clear the impact of combinations of various factors; significant interaction effects, as it were. For example, one in four nascent firms in richer countries with a growth aspirations were export oriented compared to less than 1% in poor countries, with an emphasis on agriculture, no aspirations for growth, and a large population.

Sweden, among the smaller countries with higher levels of income and more sophisticated owners, was distinctive. When separate analyses were completed for Swedish firms, growth orientation appeared most significant as a factor associated with more export activity for firms in all life course stages, with education beyond secondary school associated with an export emphasis among nascent and established firms. The decision tree analysis for Swedish firms made clear that a small proportion of nascent, new, and established firms accounted for the majority of those export oriented. For example, those Swedish nascent firms not in consumer services, with education beyond high school and motivated to pursue opportunities were 23% of all nascent firms but 90% of those with an export orientation. Among new and established firms there was a slightly greater range of categories emphasizing exports, but still a small number of distinctive firm types were responsible for most of the export emphasis.

One major policy implication from this analysis is that the national context has a major impact on the tendency for firms to be export oriented, particularly the size of the domestic market, population density, the wealth of the country, and the economic structure. While some of these features change as a country develops – as wealth increases and the economic structure adjusts – several can be considered enduring features of a country, such as relative population size and density.

Programs to encourage export activity might focus on those firms already oriented toward the global markets, those with larger teams of owner-managers, with a growth orientation, and expecting to have an innovative impact on the markets.
6.10 References


## Appendix 6.1 Country Codes

<table>
<thead>
<tr>
<th>Two letter code</th>
<th>Country</th>
<th>Two letter code</th>
<th>Country</th>
</tr>
</thead>
<tbody>
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<td>Argentina</td>
<td>JP</td>
<td>Japan</td>
</tr>
<tr>
<td>AU</td>
<td>Australia</td>
<td>JO</td>
<td>Jordan</td>
</tr>
<tr>
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<td>Belgium</td>
<td>NL</td>
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</tr>
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<td>Brazil</td>
<td>NZ</td>
<td>New Zealand</td>
</tr>
<tr>
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<td>Canada</td>
<td>NO</td>
<td>Norway</td>
</tr>
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<td>Peru</td>
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</tr>
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<td>SG</td>
<td>Singapore</td>
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<td>SI</td>
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<td>FR</td>
<td>France</td>
<td>ZA</td>
<td>South Africa</td>
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<td>DE</td>
<td>Germany</td>
<td>KR</td>
<td>South Korea</td>
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<td>Greece</td>
<td>ES</td>
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<td>HK</td>
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<td>Iceland</td>
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<td>Italy</td>
<td>VE</td>
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</tbody>
</table>
7. Is the Small Firm Still a Category of Analysis?

Charles Sabel
Columbia Law School

Here are some perennial questions worth re-asking (again) today: Is it useful, or is it misleading, to study small firms as a distinct category of enterprise? If misleading – if small firms are best understood in context – what features of the context should we attend to in trying to understand them? In the brief note that follows I offer some reasons for thinking that the stand-alone view is less compelling than once it seemed, and suggest therefore that context, especially the changing relations between big firms and small is back (again) in the study of small firms. The goal, of course, is to stimulate debate; and I trust this worthy purpose excuses me from even attempting to resolve the many tricky issues that even cursory reflection reveals.

Contemporary interest in small firms as a distinct – nearly stand-alone – category dates to what can be called, with only slight exaggeration, the crisis of large-scale institutions of the late 20th century. It was the rigidity of the large corporation that left room for agglomerations of small firms to prosper in fashion-sensitive industries, such as shoes or garments, and in sectors where customer needs were highly particular and rapidly changing, such as capital goods. Hence the success of the traditional industrial districts. Similar rigidities hindered large firms in exploiting radically new technologies. Hence the explosion of high tech entrepreneurs often clustered in new industrial districts of their own.

The state, particularly but not only in developing countries, was of course implicated in this crisis of the large institution as well. The focus on large industrial projects - the steel mill was the classic example – in combination with bureaucratic inefficiency and outright corruption meant that development policy not only subsidized the largest enterprises, but also, knowingly or not, created obstacles to the creation of small ones. Hence the explosive growth, in developing countries, of an informal sector of micro and small
firms, beyond state control, whose vitality was a stark contrast to the stagnation of the formal one, at least for a time.

But large institutions – particularly the large, multinational firm and the state in developing economies – responded to these threats in ways that put new pressures on at least some categories of small firms that had challenged them. And the small firms’ response to this response confounds, or so it seems, the original contrast.

Start with the reaction of the large firms to the challenges of the small: First, in almost all sectors large firms have vertically disintegrated, or are in the process of doing so. This means that they buy from firms typically smaller than themselves components or parts they once made inside; moreover, buyers are increasingly likely to co-design parts and components with suppliers, so conceptual functions that once seemed largely the preserve of big corporations are diffusing much more widely.

Second, the disintegration of production is not limited to the manufacture of physical goods. The production of knowledge needed to define and realize coming generations of products – innovation through research and development – is implicated as well. A clear sign is the decreasing importance of the large, centralized laboratory in industries, such as pharmaceuticals and telecommunications, where it was pioneered. Today, research is likely to be conducted by an ad hoc consortium of firms of very different sizes, and often publicly funded laboratories as well, all contributing highly specialized, complementary expertise. In biotechnology, where this tendency is the most pronounced, it is routine for a large pharmaceutical company with, say, expertise in the metabolic pathways that produce a particular pathology, to search for therapeutic compounds in concert with a small start-up company which has developed tools for identifying, among billions of possibilities, the classes of molecules most likely to correct the metabolic defect without producing toxic side effects.

Third, at the intersection of both these developments – disintegration of physical production into chains of component suppliers and the collaborative networking of research – is the “platform” organization of production. In the platform organization typical today of, many, fast growing industries – mobile phones, computers, airframes – the distinction between part and whole, final producer and part maker, becomes so blurry it is often indiscernible. In platforms the value of the parts depends on the system or interface that connects them, and the value of the system depends
on the performance of the parts it links: wings, engines and fuselage in the case of planes; digital signal processor, radios and antennas for various frequencies in the case of a cell phone; microprocessor, web browser, media players and other applications in the case of an operating system. As no large firm can, by itself, produce all the components or applications on which the platform depends, and no combination of small firms can produce the interface and other infrastructure of maintaining the platform, this form of production – together with disintegration of supply chains and collaborative research and development – seems to depend on the symbiosis of types of firms that for a time might have been thought to have been antagonistic.

The state’s relation to small firms has changed in related ways. Focusing again on developing economies (and leaving entirely aside interesting and complex questions regarding the increases in public-private provision of services with important implications for small firms) three shifts stand out. First, developing economies have discovered clusters or industrial districts. Whether these are conceived as relatively self-contained entities – flower growing in Kenya, mangoes in Ecuador – or as part and parcel of co-development complex or supply chains involving foreign collaborators – auto assembly and parts manufacture in Brazil, or, on a more modest scale South Africa – these clusters are now seen as part of the building blocks of successful development. Indeed, it is an indication of how much has changed (and given the uncertain fate of the industrial districts, to which we come in a moment, not necessarily for the better) that in Ethiopia and other parts of sub-Saharan Africa the cluster (in, say, leather tanning or flowers) has replaced the steel mill as the foundational development project.

Second, venture capital is no longer restricted to the advanced reaches of the advanced economies. On the contrary, venture capital is rapidly spreading to the periphery: the success of high-tech, venture capital in Taiwan, Israel, and – incipiently, but with great thoughtfulness and determination, Brazil – is a portent of things to come. One deep lesson of venture in the periphery – and not just there – is that you grow by finding activities that complement those of sector leaders, not (as the Germans, Italians, Japanese and South Koreans did) by competing directly against them. Another lesson is that start ups with technically and otherwise ambitious plans have to interact with large firms – as potential customers and suppliers – from the first. Thus the spread of venture (and novel institutions for
providing later-stage) capital also undermines the centrality of the large firm in development, and directs attention to the interplay of large and small. Take, for example, Embraer, the Brazilian producer of regional jets – and the world’s third largest airframe manufacturer: The firm (originally state owned, and privatized in the 1990s) co-designs and in effect co-finances its sophisticated products with an extensive network of domestic and foreign suppliers; and a number of key domestic collaborators have themselves been, or are being financed by new venture and private equity programs at BNDES, the national development bank. Venture capital is here fostering platform organization linking large and small firms, center and periphery.

These two changes, and the interaction between them, is reflected in and made explicit in a third: the open affirmation by public authorities that are pursing industrial or “productive developmental” policies. The days of planned development – even development planned by MITI bureaucrats – is of course long gone. But gone as well are the days of the Washington Consensus, which exalted the informal economy as the triumph of the entrepreneur over the bureaucrat, and insisted that entrepreneurship combined with state provision of property rights, the rule of law, open markets – and little more – would produce growth. It is an open secret that countries such as Bolivia or El Salvador that followed the new rules did not grow, while countries like China that applied them in highly “heterdox” fashion, if at all, did. It is an equally open secret that small firms collaborating with each other, and larger ones, to enter and succeed in the world economy need many kinds of public inputs: regulatory systems for certifying the integrity of the food chain, and traceability of products in case of breakdown, or financial support for entry into risky industries (venture capital was in important ways state sponsored at the start in both Taiwan and Israel, just as it now is in Brazil), or sector-specific training. Under many names, and in advanced countries such as Finland in the guise of technology or innovation strategy, industrial policy is openly back: But it is not the familiar industrial policy of filling in the (known) backward and forward linkages within given, key sectors. The focus instead is on network building, connecting individuals and firms who can make further connections that the network initiators or sponsors could never have anticipated, and thereby generating strategic orientations, and collaborations between firms of many different shapes and sizes – collaborations in co-designing supply chains, in
platform organizations, in cooperative research and so on. It is the connections among firms and their very connectability that count in this new policy world, not the isolated features of the firms connected.

To see what these changes in industrial organization and the concept of industrial policy – two defining elements of “globalization” – mean for “the” small firm, consider what has become of the canonical Italian industrial districts. As their growth and consolidation in the 1980s was an exemplar of the new importance and independence of small firms, so their situation today should shed some light on the current state and possible future of the small firm as a category of analysis.

As many of you will know, what has become of the Italian industrial districts is – anything you can think of. Some have responded to low-wage competition by importing labour, and then entrepreneurs, from China – as happened in the textile district of Prato. Some have moved production to low-wage countries, such as Romania or Tunisia – as in the case of many shoe and garment firms from the Venice region. Some moved from final goods to production of machinery for making those goods. (This is a continuation of an old story: Vigevano in Lombardy moved from shoes to shoe machinery in the 1980s; Canelli, in Piedmont, has moved from wine to wine equipment; in the Venice region several districts have gone from textiles to textile machinery; and in Emila Romagna, Mirandola has shifted from textiles to biomedical equipment.) Still other districts have moved into services. There has been, in general a upgrading of products, so that value added remains high and compensates for smaller volumes. Some few districts – Mirandola and Montebelluno, a center of ski boots and advanced sporting equipment – have succeeded in attracting research and development facilities of leading multinationals, and are becoming world leaders in their domains. But firms in industrial districts do not, as a rule, invest directly abroad. They stay rooted. In many districts medium and large firms are taking the lead, establishing links to the outside, re-ordering relations within the district when it suits them, and generally growing – it seems – at the expense of the smaller and smallest firms that once played a more equal part in the life of the district. Carefully reviewing this jumble of reactions, the authors a good summary of recent development in the Italian districts, Rabelloti, Carabelli and Hirsch report that Italian researchers are shifting emphasis from the district to the firm, because it is at that
level – today – that strategy is forming. This is surely a sage reaction – and also a measure of just how necessary it is to acknowledge how much we don’t currently know about things once familiar. And the view from the traditional districts is, at best, half the picture. We would find the same complex jumble of reactions if we looked at emergent districts in developing countries, especially the middle income ones – Brasil, Russia, India and China.

On second thought, though, “back to the firm” is not quite the pointer we need. In our current age of globalization, I have been trying to suggest, the answer to the perennial question about the utility of studying the small firm is no – the small firm is not worth studying by itself. The reason is not that small firms are uninteresting or irrelevant to economic development. The problem, rather, is that the very nature of “the” firm is changing, and we are unlikely to get at those changes by studying the small firm. Indeed, to understand these changes the foregoing suggests that we not look to firms at all, but to the relations among them – the forms of cooperation that allow firms to determine, as they collaborate, whether their partners are trustworthy and capable enough to co-design (and continue to improve) complex products whose specifications can not be determined in advance. Such collaboration is a fact of modern economic life – otherwise we would not observe vertical disintegration, cooperative research and the rise of platform production after a century dominated by the vertically integrated corporation. The economic theories of the firm that explained what went before can’t explain the contrary development now – if a theory predicts A and the opposite of A it predicts nothing. To think about an alternative theory – and to get a better grip on globalization, and with it the place and function of firms of different sizes and capacities – we would do well, therefore, to start with the relations among firms whose very existence counfounds conventional views. At least that is where I and a number of friends are placing our bets.24 As in all such explorations, we’d like company – or the kind of criticism that will convince us to search out less misguided companions.

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You can’t pick up a newspaper without reading an article about it. You can’t go to Borders or Barnes & Nobles without finding a plentiful supply of books on the topic, and you certainly can’t hear many political debates where the subject isn’t front and center. Whether the movement is portrayed as threatening the very underpinnings of the economy or rolling out the next wave of business opportunities, the fact is that globalization, and the technological innovations that have made it possible, has changed and will continue to change the world.

8.1 Definition of globalization

Globalization, as a concept, refers both to the "shrinking" of the world and our increased consciousness of the world as a whole. It is a term used to describe the changes in societies and the world economy that have resulted from dramatically increased cross-border trade, investment, and cultural exchange. The affects of globalization have been felt in every nation, region, and culture as it has produced a growing interdependence of people with regard to political systems, societal influence, economies, and cultural exchanges.

For the purpose of this paper, our primary interest focuses on the increasing economic integration and interdependence of countries that has resulted from globalization and the entrepreneurial opportunities that result. Globalization has increased the flow
of goods, services, people, real capital, and money across national borders, resulting in a more integrated and interdependent world economy. This interdependence is demonstrated by the ripple effect of the slowdown in the U.S. economy, which is being felt from Turkey to Thailand (Barta & Walker, January 24, 2008). Stocks in China, India, Hong Kong, and Indonesia dropped sharply in January amid fears of a global recession brought on by the sub-prime mortgage financial collapse and the housing market meltdown.

8.2 Globalization is changing

According to Thomas Friedman (2005), the phenomenon of globalization is not new. He argues that the world has experienced three great eras of globalization. The first period, from the time of Columbus’ sail to the Americas to around 1800, was about the dynamic changes that occurred when countries for a multitude of reasons, economic and otherwise, drove global integration. (It could be argued that there were several eras of intense cross-cultural encounters as early as pre-modern times – of particular note would be the time of the Roman and Han empires [200 B.C.E. to 400 C.E] and the ancient silk-road). The second period, from the early 1800s to roughly the year 2000, global integration was driven by multinational companies seeking new customers, new locations for manufacturing, new sources of supply, and new collaborations for economic gains. Friedman argues that the beginning of the 21st century provided an entirely new model for globalization, as technology provided newfound power for individuals to collaborate and compete globally. According to Friedman, the future of globalization, while not bypassing existing companies, will be driven by individuals through entrepreneurial action.

While the first and second period of globalization were dominated by the Western countries, companies, and explorers, the third wave of globalization will be driven by a more diverse group of individuals – the majority who will be non-Western. According to John Naisbitt (1994), a global paradox is that the bigger the world economy is becoming, the more powerful its smallest players. “The more the economies of the world integrate, the less important are the economies of countries and the more important are the economic
contributions of individuals and individual companies”. (p298). We might conclude than that globalization provides a cornucopia of opportunities for entrepreneurs and SMEs.

8.3 Globalization, entrepreneurship, and economic development

Over the last decade there has been increasing recognition of the role the entrepreneur plays in economic development. As one of our respected economists, William Baumol, has observed, the entrepreneur is “an indispensable component” of growth and prosperity – the bold and imaginative deviator from established business patterns and practices, who constantly seeks the opportunity to introduce new products and new procedures, to invade new markets, and to create new organizational forms”. (see Carl J. Schramm, 2006, The Entrepreneurial Imperative, p.4)

Since 1999, Babson College, in conjunction with the London Business School, has been assessing the state of entrepreneurial activity in more than 40 countries – both developed and emerging economies – through the Global Entrepreneurship Monitor (GEM) research project. The countries that have been part of the research project comprise over two-thirds of the world’s population and over 90 percent of world GDP (GEM Global Report, 2006). The countries that have participated in the GEM research represent developed countries, for example, the U.S., Japan, Sweden, France and Germany, and emerging economies in various stages of development, such as the eastern European, China, Peru, and Jamaica.

GEM estimates the level of entrepreneurial activity by assessing the rate of nascent entrepreneurs – those in the process of founding a business – and new business ownership (less than 42 months in business operation). Although there are variants in the percentage of the population involved in entrepreneurial activity, entrepreneurship is found in all economies. In fact almost 9 percent of the adult population is actively attempting to launch a new venture at any given time (GEM Global Report, 2006).

What is interesting to note is that the GEM studies have demonstrated a relationship between a country’s level of GDP and its level of entrepreneurial activity. GEM countries with lower
levels of GDP have generally higher levels of very small companies and early-stage entrepreneurial activity, especially necessity driven entrepreneurship. Early-stage entrepreneurial activity is relatively low in high income countries, especially for the core countries of the European Union and Japan. Countries with highest levels of GDP show increasing early-stage entrepreneurial activity, especially opportunity driven activities, as more individuals have the resources to go into business for themselves in an economic environment that allows for the exploitation of opportunities.

Regardless of development level, entrepreneurial activity for the GEM countries is a crucial driver of growth in their economies. While there has been an increasing recognition of the role the entrepreneur plays in economic development, there has also been demonstration of the role the entrepreneur will play in globalization. In some GEM countries, 40 percent of early-stage entrepreneurs expected 25 percent or more of their customers to come from outside their national markets (GEM Global Report, 2006). Increasingly, small firms and even start-ups are identifying foreign markets for customers, suppliers, and places for manufacturing – the opportunity side of the equation. On the other hand, these small forms are facing new competitors for the products and services they produce.

8.4 What we know about the emerging and developing entrepreneurial world

Entrepreneurship and SME research has almost exclusively focused on North American and European countries. The body of knowledge for non-American and non-European entrepreneurship and SME is extremely limited. Bruton, Ahlstrom, Obloj (2008) found only 43 articles on entrepreneurship in emerging countries in a journal review of nine top journals for entrepreneurship research from 1990-2006, and the majority of those articles focused on the former Soviet Union and the People’s Republic of China. Yet it is predicted that emerging regions and countries, will play a critical role in the world economy of the mid-21st century (Wilson & Purushothaman, 2003).

While little is known about emerging economies, there is even less known about developing economies. For example, as important as the GEM research project has been in demonstrating the level
and types of entrepreneurial activity and the impact on economic growth, none of the GEM countries would be considered subsistence economies.

Since every nation, regardless of political, cultural, social, religious, or economic environment, exhibits some level of entrepreneurship (Morris, 1998), one could hypothesize that the under-developed economies will follow similar development paths but at a slower pace. Yet the rate and types of entrepreneurial activities very widely among nations (GEM Global Report, 2006), important cross-national differences exist in the profiles of emerging countries (Manolova, Eunni, Gyoshev, 2008), strategy research has shown that findings in developed countries do not always apply to emerging economies (Peng, 2000), and assumptions from emerging economies may not apply to developing countries (West, Bamford, Marsden, 2008). Therefore, understanding the cultural, institutional, and structural differences that impact entrepreneurial and SME development in emerging and developing economies is important as these influences may vary considerably from those in developed countries.

8.5 Entrepreneurial Needs Differences for Developing versus Emerging Countries

There are differences between the types of economic activities in emerging and developing economies. Emerging economies typically have infrastructures that provide a more consistent supply of electricity and other sources of power, better roads and other means of transportation, and higher average incomes of consumers. Developing economies suffer from a lack of or inconsistent supply of utilities, poor transportation infrastructure, and very low levels of per capita income.

According to the World Bank, a developing or low income country is a country with a per capita gross national income of $905 or less. Examples of such countries include Haiti, Vietnam, Malawi, Niger, Uzbekistan, etc. Generally speaking, these countries are characterized by weak and vulnerable institutions; they suffer from a chronic lack of resources, capacity and training. However, they do not suffer from lack of entrepreneurship. Rather, it is the regulatory and institutional
environment in which entrepreneurs have to operate that may serve as a hindrance to business development (De Soto, 2000). In many developing countries, budding entrepreneurs are discouraged by the mound of regulations and the costs in time and money necessary to start and register a business. Often, entrepreneurs in these countries must also operate in an environment riddled with corruption and intimidation. In many African countries, given the heavy centralization of services, a new entrepreneur must, for instance, travel hundreds of miles to the capital city to attempt to secure the necessary paperwork to open or register a business. More often than not, the person must spend several days in the capital city waiting for the one person who has authority to sign off on business papers.

A World Bank team led by Simeon Djankov created criteria for what they call “objective measures of business regulations” and their enforcement in 178 countries. Among these measures are the following (see Appendix A for Figures 1, 2, 3, 4, 5, 6, and 7):

- Starting a Business (How many steps does it take to register and start a business)
- Dealing with Licenses
- Access to Credit (Loans, microfinance, etc…)
- Registering Property
- Enforcing Contracts
- Legal and Property Rights

Given the limited scope of this paper, we pick three of those measures: Starting a Business, Dealing with Licenses, and Access to Credit, as a way to gage how selected developing countries are performing, using the US as a benchmark country. The first two are evaluated in three ways: The number of procedures; the length of time (in days), and the cost (in percent of per capita income). Access to credit is measured on a scale of 0-6. Among the countries selected, the Philippines has the highest number of procedures to be followed before starting a business (15), whereas the cost of starting a business (expressed as a percentage of per capita income) is highest in the Democratic Republic of Congo (487%). The comparable numbers for the US are 6 and 0.7%.
When it comes to dealing with licenses, Peru and the Philippines have the highest number of procedures (15). Notice that the US and Nicaragua tie for fewest number of procedures (6). The real differences are in the number of days that it takes to complete the process of licensing, and the cost of the process. In Benin and the DRC it takes almost a year to complete the licensing process, whereas in the United States it takes only 40 days. Similarly, when it comes of the cost of dealing with licenses as a percentage of GDP per capita, it comes to almost 3000% in Niger, 2000% in the DRC, about 1000% in Mali, but just 13.4% in the US. As for access to credit, the Doing Business team defines one aspect of each as follows:

The depth of credit information index measures rules affecting the scope, accessibility and quality of credit information available through either public or private credit registries. A score of 1 is assigned for each of the following 6 features of the public registry or the private credit bureau (or both):

- Both positive credit information (for example, loan amounts and pattern of on-time repayments) and negative information (for example, late payments, number and amount of defaults and bankruptcies) are distributed.
- Data on both firms and individuals are distributed.
- Data from retailers, trade creditors or utility companies as well as financial institutions are distributed.
- More than 2 years of historical data are distributed. Registries that erase data on defaults as soon as they are repaid obtain a score of 0 for this indicator.
- Data on loans below 1% of income per capita are distributed. A registry must have a minimum coverage of 1% of the adult population to score a 1 for this indicator.
- By law, borrowers have the right to access their data in the largest registry in the country.

The index ranges from 0 to 6, with higher values indicating the availability of more credit information, from either a public registry or a private bureau, to facilitate lending decisions (http://www.doingbusiness.org/MethodologySurveys/GettingCredit.aspx)
As figure 9.7 shows (Appendix A), concerning this factor several of the selected developing countries have attained scores comparable to the United States. Indeed, Honduras, Peru and the United States each scored (6) on this measure, with Nicaragua not far behind with a score of (5). Others are still lagging considerably, however. Benin, Mali, Niger, and Senegal obtained only a score of (1) as far as access to credit is concerned, whereas Vietnam and the Philippines each scored (3).

But beyond these factors, other less tangible factors, including cultural factors may contribute to the slow progress of entrepreneurship. For example, the 2008 World Bank Doing Business Report compares two African countries with respect to women’s access to credit. According to the report, in the Democratic Republic of Congo (DRC), married women need the consent of their husbands to become entrepreneurs (or of a judge if they are single). As a result 18% of small businesses are run by women in the DRC. Comparatively, in the neighbouring country of Rwanda, no such constraint exists on women; consequently, more than 40% of small businesses are run by women.

Overall, it is ironic that whereas the poorest countries in the world are most in need of entrepreneurship, they tend to put up the most barriers to entrepreneurship development. Much would be gained by developing countries undertaking serious institutional and regulatory reforms, accompanied changes in some cultural practices, such as constraining access of women to entrepreneurship resources, in order to create an incentive structure that would encourage rather than discourage entrepreneurship development.

8.6 Opportunities and Challenges

Because subsistence economies, and some regions of emerging economies, lack a strong infrastructure for supporting entrepreneurial activity, some have proposed external aid and models of foreign investment, rather than growing entrepreneurial capabilities, as a way to jump-start these economies (West et al, 2008). Proponents of this approach argue that knowledge spillovers from foreign firms that expose entrepreneurs to new technologies, train employees that
eventually undertake entrepreneurial activities, and provide the opportunity for locals to form alliance partnerships benefit local firms. However, criticism has grown about the negative consequences of globalization (Spencer, 2008). Some of the concerns relate to the harm to local firms by competition from internationalizing firms in foreign markets (de Backer & Sleuwaegen, 2003). Foreign competitors can pose strong competition for labour, raw materials, and customers (Spencer, 2008).

Other criticism of globalization has focused on the negative environmental impacts resulting from increased economic activity in developing and emerging economies that have few or poorly enforced environmental controls. According to William Frederick, there is a persistent tension between core social values of economizing and ecologizing. The impulses towards consumption, growth, acquisition, and expansion are seen as enemies of resource conservation, maintenance of reserves, and preserving a way of life (In Robbin Derry, 2002, pp.197-207).

Polluted air, soil erosion, acid rain, and chemical spills are just some of the negative consequences of unbridled growth without regard to adverse impact by the government or companies. One of the most talked about examples is China. Although there has been expressed awe and competitive fear over the growth in Chinese industrial capability and entrepreneurial zeal, China’s emergence as a global power has not been without negative consequences. China’s growth strategies have placed significant pressure on the environment. A recent National Public Radio session and A New York Times video reported the severe landslides that have resulted from the Three Gorges Dam project. The landslides have not only contributed to water pollution but have uprooted families multiple times.

China is not the only country that has seen negative environmental impact from growth. (Wiedenbaum & Hughes, 1996) Mexico maquiladoras have contributed to poor environmental and social conditions along the border. Brazil has experienced massive loss of rainforest and soil erosion from over-logging.

Economic growth and environmental quality tend to move in opposite directions in emerging and developing countries, yet high-income countries tend to have lower levels of pollution than lower-income countries. As economies modernize, a higher value is placed on environmental quality as basic needs are being met in the marketplace and new production techniques, as well as cleaner technologies, are employed (Wiedenbaum & Hughes, 1996).
Some critics are concerned with cultural impacts from the loss of indigenous culture from economic development and entrepreneurial activity. Indigenous populations have organized grassroots resistances to policies and development that adversely affect their communities and culture (Gray, 1998). Recently resistance has sprung up in remote and far flung areas such as the Ecuadorian Amazon, the Pacific Islands, Manipur in northeast India, and as near to home as Sapelo Island in Georgia where real estate development threatens the remaining settlements of the Geechee (also known as the Gullah) people (Dewan, May 4, 2008), Gullah community tries to keep its identity against development.

Most entrepreneurship researcher have adopted the stance that entrepreneurship is a positive force because of its impact on job growth, creation of new products and services, provision of self-control to the individual, and fostering greater efficiency in meeting people’s needs and wants (Brenkert, 2002). Yet entrepreneurship research has assumed profit-maximization and self-interest maximization (Bruton, Ahlstrom & Obloj, 2008), which may not be universally held in all emerging or developing cultures, nor in some sub-cultures in developed economies. For example, many Native American groups hold higher esteem for the welfare of the group and for economic development that recognizes the importance of retaining traditional culture (Hosmer and O’Neill, 2004).

In an increasingly globalized economy, international economic institutions such as the World Bank and the World Trade Organization can exert a growing influence on entrepreneurs and entrepreneurial opportunities. While some World Bank aid is devoted to promoting entrepreneurship in developing countries, most of the activities of the World Bank and other international organizations focused on government-to-government negotiations, national economic policies, and transfers of aid from rich to poor countries (GEM Executive Report, 2007). These traditional forms of economic development have come under increasing criticism. William Easterly (2006) argued that there is little evidence of benefit from the more than $2.3 trillion given in foreign aid in the past five years. However, the World Bank and other institutions have the potential to stimulate economic growth directly by promoting entrepreneurship through building up local market institutions, infrastructure, and financing (GEM Executive Report, 2007).

The World Bank and other trade institutions can also indirectly encourage entrepreneurship by establishing a domestic framework
for economic flexibility and adjustment in an open world economy. In an article in the Wall Street Journal (January 15, 2008), entitled The Real Key to Development, Mary Anastasia O’Grady argues that to move economies out of poverty requires unleashing the entrepreneurial spirit. She cites a recent study of the Heritage Foundation that demonstrates that economic freedom and prosperity are highly correlated.

Onerous regulations not only directly impact economic activity and therefore economic growth. There is also an indirect impact. The GEM studies have developed a “red tape” index, which correlates negatively with high growth expectation entrepreneurial activity. All other things being equal, the more onerous a country’s new business regulations and the more local experts perceive these regulations to be onerous, the lower the level of ambition among a country’s entrepreneurs (GEM Executive Report, 2007).

Countries benefit from commitments to open trading rules and practices by providing a domestic business environment that encourages innovation, the internal mobility of factors of production, and entrepreneurial activity. Nations that produce good banking systems, reasonable interest rates and tax structures, invest in infrastructure and education are predicted to see improvement in their economies. The affect of deregulation alone on the economy can be impressive. After more than 20 years of gradual easing of regulation, Peru has seen more than six percent annual growth for the last seven years. The key reform has been the lowering of tariffs that protected local industries (Wall Street Journal, May 5, 2008). However, countries should also focus on building local entrepreneurial spirit in addition to easing regulation.

In developing economies, micro-enterprises are fast becoming the major source of job creation and employment. For example in Latin America, the micro-enterprise sector employs more than half of all workers and has experienced remarkable growth in the last decade. However, due to lack of training and adequate support, poverty continues to be an issue in the sector. Among the recommendations for poverty reduction, policies and activities should aim to increase

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25 A micro-enterprise is typically defined as a productive unit employing less then 10 people, with a total asset value of less than $20,000 (Orlando and Pollack, 2000).
production and sales of firms in the micro-enterprise sector through improvement of skills (Orlando and Pollack, 2000).

In general, to the extent that foreign aid can promote entrepreneurship in developing countries, new opportunities for entrepreneurs elsewhere in the world will also appear. Increased entrepreneurial activity worldwide increases the opportunities to sell goods and services, source raw materials, and provide capital (Schramm, 2006).

8.7 The Bottom of the Pyramid and Other Entrepreneurial Opportunities

The “bottom of the pyramid” or BOP is a term that recently has been used to refer to the market potential of the world’s poorest people. The BOP is made up of the four billion people making less than two dollars per day, but it is estimated to have a market buying power of $13 trillion (Pralahad, 2004). Researchers have proposed that the multinationals develop strategies to serve these consumers, make profits, and do “good.” However, Seelos and Mair (2007) point out that the complexities and potential costs involved in serving this market requires multinationals to radically change their strategies and may not justify investment. Large corporations eschew major disruptions in their product offerings, manufacturing processes, and market channels. They cater to their most profitable customers and typically focus resources where profit margins are most attractive (Christiansen, 2003) however this provides opportunities for entrepreneurial companies to use new technologies to target low-end and/or entirely new markets.

C.K. Pralahad (2004) says that we must stop thinking of the poor as victims but as value-conscious consumers and resilient and creative entrepreneurs. Pralahad argues that the traditional products, services and processes will not work in the BOP market and calls for multinationals to radical rethink strategies for reaching these customers. However if Christiansen’s model holds for the BOP market, then multinationals’ reluctance for change, opens up opportunities for entrepreneurs and SMEs.

The terms “Third World” and “developing countries” are frequently used loosely without understanding the very real differences that
exist among the countries to which these labels are frequently applied – for example countries with sophisticated manufacturing and extensive commercial agricultural production systems (e.g., India and Brazil) to countries that have rather limited research and production capabilities and are not capable of producing the food needed to sustain their populations (e.g., Myanmar, North Korea, and some countries in West Africa). So, companies, SMEs, and entrepreneurs will have to investigate different needs and capacities to identify the best opportunities to pursue. However some generalizations can be made of the most pressing needs and therefore opportunities that exist in the developing world.

One of the most pressing and universal needs in developing countries is the need for water. It is estimated that over 1 billion people in the world lack adequate and safe water and 2 billion lack basic sanitation systems (Georgia Tech Institute of Technology Research, 2007). Entrepreneurs and companies that develop systems that filter, treat, and supply water economically should find an enthusiastic market. Another pressing need is cheap and reliable supplies of power. Many electrical systems, even in the more advanced developing countries like Brazil, are designed to provide power to cities and industry and large farms. Yet 75 percent of the world’s poor live and work in rural areas (IFAG Rural Poverty Report, 2001). Providing power to rural areas, micro-enterprises and small farms isn’t presently done cheaply enough to be affordable. What are needed are systems that uniquely fit the needs of the BOP target market at a price that is affordable. Many developing countries need improvements in agricultural techniques or transportation systems to allow farmers to increase production and get it to the market in ways that fit special needs and conditions, for example rice growing techniques that use less water or improvements to transportation systems that move fruits, vegetables, and flowers efficiently and economically. Finally telecommunication and information technology provides a promising area for development. The developing countries are following industrialized countries in desiring information services to supply their informational needs. However traditional infrastructure models of service organizations may not be the appropriate model. Fixed telephone lines remain a hurdle, however, wireless technology and online systems allows for leapfrogging older technologies that required landlines.
8.8 Examples of Creative Approaches to Meeting Needs

Although the needs of the developing world are great, and sometimes the opportunities seem difficult to identify and pursue, there are examples of how creative solutions have been designed to meet the specific environment of the developing economies. The Austrian economist Joseph Schumpeter’s definition of entrepreneurship placed an emphasis on innovation in new products, processes, markets, and forms of organization. That same entrepreneurial spirit is needed to find creative ways to meet the needs of the developing world in models that are efficient and effective. There are a number of examples of how companies and entrepreneurs have identified new products, new processes, combinations of products, new markets, new forms of organization, and even different forms of payment that allow them to provide needed products and services for the developing world.

New Products. An example of new products designed for the needs of the developing world is WAY Systems, an international leader in point of sales devices, co-founded by Damien Balsan. While at MIT’s Sloan School of Management Balsan wrote his thesis on Mobile Commerce Business Models with a particular focus on emerging countries. Balsan recognized that in developing nations, ordinary “bottom of the pyramid” merchants – taxi drivers, roofers, Avon ladies, tour guides – could grow their businesses if they could accept secure credit card payments. So Balsan designed mobile phones with a card reading stripe and pulled together a credit network. Although the model was originally designed for developing countries, it is also effective in any direct sales situation, which has provided growth opportunities for the company beyond the original conception (Global Entrepreneurship: Inefficiency as Opportunity in the Developing World, 2006).

New Processes. Fabio Rosa, an agronomic engineer in Brazil, decided to tackle the immense problem of improving economic conditions in one of the most depressed areas in southern Brazil. The region’s main source of income is produced from irrigated rice crops, however, the water supply was controlled by large landowners, who priced water at a level triple the world average, destroying any opportunity for income creation by small farmers. Although rice can be irrigated with ground water, and there was an ample supply
of ground water in the region, there was no affordable electricity to bring the water out of the ground. The electric companies’ process of using the conventional three line process, while appropriate for urban areas and large farmers, produced greater capacity, and greater costs, than was needed for small rural farmers. Rosa identified a “monophase” system suitable for more modest energy needs. The “monophase” system, in addition to substituting cheaper materials for more expensive one, and using local participants to supply labour, resulted in the provision of electricity at a cost that was affordable to local farmers (Bornstein, 2007).

New Combinations. Rosa later established a for-profit company, Sistemas de Tecnologia Adequada Agroeletro, to sell photovoltaic solar energy to rural areas of Brazil. Recognizing that one of the problems facing wider adoption of the technology was the cost, Rosa saw that he would have to package the technology with something else to make it feasible. He identified that rural Brazil suffered from inadequate fencing for cattle because of the cost of using traditional fencing systems. This resulted in overgrazing of land and detrimental effects on pastureland. Rosa saw that if he packaged the solar energy system with inexpensive electric fencing of polywire and fiberglass posts, he could bring down the cost of fencing by 85 percent, while supplying inexpensive electricity to rural areas, and improving land management (Bornstein, 2007).

New Markets: Two Bangladeshi entrepreneurs, A.H.Md. Maqsood Sinha and Iftekhar Enayetullah, provide a case study of a creative approach in developing a new market and then forming a joint venture to reach beyond the confines of the small original market. Sinha and Enayetullah developed a venture to turn high organic waste (mainly from food remains) into compost that could be sold as a substitute for chemical fertilizers. The venture’s goal was to tackle two problems---the social and environmental threat from the lack of an adequate system for waste handling despite large financial investment and the drastically lowered soil quality from the overuse of chemical fertilizers – while making a profit. The venture’s initial market was home gardeners and small organic farmers – a market ignored by the larger and more traditional supplier of chemical fertilizer. In order to grow the business to reach economies of scale and to have more impact on the oversupply of waste materials, Waste Concern formed a joint venture with Map Agro, the largest fertilizer company in Bangladesh. The success of the organic fertilizer in the marketplace produced an attractive financial model for Map Agro.
and now constitutes 25 percent of their overall revenues (Seelos and Mair, 2007).

**New Forms of Organization.** Telenor, the state-run Norwegian telecommunication company, like many companies in the developed world, had reached saturation in its home market and was seeking growth opportunities elsewhere. Relatively small for a telecommunication company, Telenor found the emerging markets of India and China intimidating. However, Telenor found that Bangladesh, with little competition from other telecommunication companies, to be an ideal spot for international expansion if the appropriate strategy could be established. In Bangladesh, Telenor and the Grameen Bank forge a joint venture partnership to form two companies—one with the strategic objective to maximize returns from operating a Bangladesh mobile phone network (GrameenPhone) and the other (GrameenTelecom), working in concert with the Grameen Bank and its lending program, to maximize the number of jobs created for the rural poor by teaching the poor to use telephones for entrepreneurial purposes. In seven years, GrameenTelecom created more than 250,000 jobs for micro-entrepreneur “village phone ladies”, while Telenor established one of its most profitable growth markets (Seelos and Mair, 2007).

**New Forms of Finance.** The creative strategies to reach the BOP market are not confined to designing new products and processes, identifying new markets, or finding new forms of organizing, developing new models of financing can also provide new opportunities for companies and entrepreneurs. The case of the Grameen Bank shows how what would appear impossible—providing credit to borrowers without assets to pledge—can prove to be feasible and profitable. The Grameen Bank is a micro-finance organization and community development bank started in Bangladesh that makes small loans to the poor without requiring collateral. What would seem impossible was possible with a new model of finance that Mohammed Yunus, the founder of Grammen Bank, designed. Grameen Bank uses a group-based credit approach relying on peer-pressure within groups to ensure that borrowers repay the loans. The innovative banking program provides people—mainly women—with small loans they use to launch businesses and lift their families out of poverty. The bank now also accepts deposits, provides other services, and runs several development-oriented businesses. For example by 2007, the Grammen Bank had provided home mortgages to almost 650,000 villagers, who make payments as low as $1.50 a
week. The willingness to provide credit to people who would have been considered poor credit risks in the past also made it possible to lease cell phones to “village phone ladies,” ensuring success for the Telenor-Grameen Bank joint venture (Bornstein, 2007). Over the past three decades, micro-credit has spread to every continent and benefited over 100 million families.

These case models demonstrate economic development strategies that alleviate poverty by developing entrepreneurial capabilities within the developing world. Whether it is a telephone with a credit card reading strip or a mobile telephone network working in concert with a micro-finance program or an organic waste company in Bangladesh, new and creative entrepreneurial models can bring economic development to developing regions and open up entrepreneurial opportunities for firms around the globe.

To be successful companies and entrepreneurs will need to adjust their typical strategies for reaching the BOP target market. According to Rick Barnes, co-founder of Charles River Ventures, to be successful in the developing world, “deep knowledge of local markets and cultures is absolutely critical to success”. The only way to stimulate more entrepreneurial activity in these regions is by “working from the demand backwards” (Global Entrepreneurship: Inefficiency as Opportunity in the Developing World, 2006).

Forging partnerships in the developing world will be critically important. Barnes believes that local people are the first people to identify opportunities, therefore, entrepreneurs from Sweden and other developed countries could forge partnerships with local enterprises in the BOP countries to identify opportunities and increase the profitability of a large number of similar businesses as well as their own. Such partnership efforts will, overtime, result in expanded markets, improved production methods, the introduction of new raw materials, and more favourable or less restrictive regulations for the sub-sector (Peace Corps, 2003).

One challenge is to provide products and services at a price that will be appropriate for the market, which requires a model that can scale and reach more buyers with less financial resources. One of the biggest bottlenecks is the cost of typical distribution systems. Many successful ventures “have turned away from the professionally intensive model in favour of models that have mobilized ordinary citizens to reach underserved markets at scale” (Bornstein, 2007, p. 154).

To reduce the price to BOP buyers will also require a willingness to identify what is truly needed and wanted by buyers and eliminate
materials or features that have become routine but may not be required for the functions of the BOP market. Creativity in packaging or bundling products, as in the case of the photovoltaic battery and fencing example, may be required. Identifying potential customers that are now being ignored with existing products and services may provide new opportunities. The BOP market has the same needs as the more affluent markets but without the resources to buy products as presently designed. Finally the willingness to use longer term financing with individuals who in the past would be seen as non-credit worthy turns individuals in the BOP market to consumers. As Peter Drucker noted, “Instalment buying literally transforms economies...Wherever introduced, it changes the economy from a supply-driven to demand-driven, regardless almost of the productive level of the economy”. (in Bornstein, 2007, p.39).

The opportunity is ripe for firms from Western countries to conduct profitable business in a sector still largely undeveloped, while at the same time contributing to poverty reduction and improvement in the social conditions in developing countries. This can be accomplished through business training, and joint development of processes and products adaptable to the economic, social and cultural conditions. In reducing poverty and growing entrepreneurial capability in the developing world today, we not only capitalize on the opportunities of today but are also growing the future opportunities of tomorrow.

8.9 Conclusions

It is as harmful to claim that the entrepreneurial process will solve all societal problems as it is to claim that it will not solve any (Velamuri, 2002). It is also harmful to claim that globalism will solve all societal problems or exacerbate all existing problems. The challenge is to develop a model of entrepreneurship that is transferable to other countries, responds to a growing need for sustainable development, and reflects cultural values.

The case models reviewed above demonstrate economic development strategies that alleviate poverty by enhancing entrepreneurial capabilities within the developing world while providing business opportunities for companies and entrepreneurs.
from other countries. Whether it is an ecotourism project in Ecuador or in food processing in Ghana, there are ample opportunities for companies to forge partnerships with local SME’s in countries that are in need of the skills and capacity to develop and enhance private entrepreneurship. If crafted well, these types of partnerships can greatly benefit both sides economically, while at the same time addressing poverty reduction strategies.

The paper also shows that government has an important role to play in the process of entrepreneurship development. Institutional reform policies, which remove barriers to private enterprise, are perhaps the most important way that the government can help release bottled up energies of private enterprise in developing countries. The institutions of the West can assist in this area as well by helping to support and fund such reform initiatives by developing governments.

Training, capacity building, and availability of funding are in the end the pillars upon which private enterprise is built eventually. And in this, the need is great for interested companies and institutions to join forces with partnerships in the developing world to implement appropriate models that will recognize the social and cultural contexts of each country.
8.10 References


Appendix 8.1

Figure 1. Starting Business: Time (Days)

Figure 2. Starting Business: Cost (% of Per Capita Income)

Figure 3. Starting Business: Number of Procedures
Figure 4. Dealing with Licences: % of Per Capita Income

Figure 5. Dealing with Licences: Number of Procedures

Figure 6. Dealing with Licences: Time (Days)

Figure 7. Access to credit
9. A Capital for New Europe

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9.1 Introduction

Thursday, January 23, 2003, on the eve of the second Iraq war, then U.S. Defence Secretary Donald Rumsfeld created an international uproar with the following quote: “Now, You’re thinking of Europe as Germany and France. I don’t. I think that’s old Europe. If you look at the entire NATO Europe today, the center of gravity is shifting to the east. And there are a lot of new members. And if you just take the list of all the members of NATO and all of those who have been invited in recently – what is it? Twenty-six, something like that? – You’re right. Germany has been a problem, and France has been a problem”. The second Iraq war thrust Europe into the battle for control of Eurasia.

The battle for Eurasia is part of a larger social and economic transformation of the global economy. Exactly what is globalization? According to Wikipedia, “Globalization in its literal sense is the process of globalizing, transformation of some things or phenomena into global ones. It can be described as a process by which the people of the world are unified into a single society and function together. This process is a combination of economic, technological, sociocultural and political forces”. The impact of globalization on the economy of regions, countries, industries and people is profound. One question the globalization council is interested in is to what extent will local firms have to be a part of the global economy? Can this process be avoided and if not how do we proceed to think about this? The purpose of this essay is to address this question from the perspective of Central and Eastern Europe, countries previously trapped behind the Iron Curtain (Fukuyama, 1999).

How does the European Union in general and new Europe in particular fit into the global situation? The proposition that we put
forward is that the answer to the above question depends on how globalization unfolds. Globalization can and may come to a halt. We are of the belief that it will continue to progress and therefore the interesting question becomes how does the European Union think about this issue strategically from a geopolitical perspective? That is, how does it pursue policies to maximize its benefit from globalization and minimize its exposure? In this essay we argue that the key to success in globalization for the EU is to engage this transformation from a position of strength. That implies (1) recognition of the geopolitical transformation that has transpired since the fall of the Berlin Wall in Eurasia, (2) the spread of globalization and (3) the importance of knowledge in economic development and its role in agglomeration economics. Because of the confluence of these events Europe needs another global capital to augment its existing two – London and Paris.26

We argue in this paper that the global geopolitical situation today requires that the EU looks to the east in order to focus on the historical center of global power in Eurasia. Therefore, this new capital should be in new Europe. The European regional funds should be used to agglomerate a new region and not to fight the forces of convergence. We proceed as follows. The next section we lay out the global geopolitical situation with a particular focus on new Europe. In section three we discuss the forces leading to divergence in the global economy. Section four examines new Europe and old Europe and suggests that new Europe needs to be integrated more closely within the global economy. The next section lays out the needs for a new capital in central Europe and the final section suggests that the regional fund be concentrated to create this new capital.

9.2 The Geopolitical Situation in the 21st Century

For the past five hundred years, world affairs were dominated by Eurasian powers that fought with one another for regional power and reached for global power. However, the world has changed. According to Zbigniew Brzezinski, for the first time in history (1) a single state is a truly global power, (2) a non-Eurasian state is globally the preeminent state, and (3) the world’s central arena, Eurasia, is dominated by a non-Eurasian power. For the United States, the chief geopolitical prize is Eurasia. While this situation is temporary, its duration and what follows it is important for world peace and prosperity.

Figure 9.1 Map of Eurasia

Source: MapPoint MSN Encarta
In this context how the United States manages Eurasia is critical. It is the world’s largest continent and its geopolitical axis. The power that dominates Eurasia would control two of the world’s three most advanced and economically productive regions – Europe and Asia. About 75 percent of the world population lives in Eurasia and most of the world’s physical wealth is there, both in its enterprises and under the soil. Eurasia accounts for about 60 percent of the world’s GNP and about three quarters of its known energy resources. Eurasia is also the location of most of the world’s politically assertive and dynamic states. After the United States, the next six largest economies and the next six biggest military spenders are located in Eurasia. It is also the home of the two most populous states aspiring to regional and global hegemony. Cumulatively, Eurasia’s power vastly overshadows America’s.

The Eurasian continent stretching from Lisbon to Vladivostok (see Figure 9.1) is the global chess set upon which the struggle for global hegemony is being played out. The key players on this chess set are located in the West, East, Center and South. Increasingly powerful and independent player in China controls the East. The West consists of Europe including most of the states of the European Union and NATO. In the center lies the former territory of the Soviet Union, a once powerful rival of the United States. To the South lies an anarchic but energy-rich central Eurasia of potentially great importance.

The geostrategy of the great chess match is to make sure that no state or combination of states gains the capacity to expel the United States from Eurasia or to diminish significantly its decisive arbitrating role. While the scope of American power is great its depth is shallow. According to Brzezinski, “Never before has a populist democracy attained international supremacy. But the pursuit of power is not a goal that commands popular passion, except in conditions of a sudden threat or challenge to the public’s sense of domestic well-being. The economic self-denial and the human sacrifice required in the effort are uncongenial to democratic instincts.”

In fact, the first decade of the 21st century has seen a reshaping of the geopolitical landscape. Just a few years ago, America’s power seemed unshakable. But a lot has changed while the United States has been in Iraq. We are now dealing with not only a triumphant

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27 Brzezinski, Z., The Grand Chessboard 1997, p. 31
28 Brzezinski, ibid. p. 35
China and a retooled Europe but also the quite rise of the rest of the world.\textsuperscript{29} The world has evolved and we have to appreciate the differences among the American, European and Chinese worldviews of the geopolitical situation. While the United States fumbles at nation building Europe spends its money and political capital on bringing peripheral countries into its orbit.

Many countries have realized that today they want the European Dream and not the American Dream. According to Richard Florida many of the foreign students that shunned American Universities are now in London and Berlin. At the other end of the Eurasia continent China is doing what Europe is doing in on the Western edge.

\textsuperscript{29} Khanna, Parag, The Second World, p. 34
Like Europeans, Asians are insulating themselves from America’s economic uncertainties. They plan to launch their own monetary fund, are slashing tariffs and increasing trade. Trade within the India-Japan-Australia Triangle of which China sits at the center has surpassed trade across the Pacific. Moreover, a set of Asian security and diplomatic institutions is being built, loosening America’s grip on the Pacific Rim.

What is clear from recent developments on the geopolitical front is that a geostrategy for the European Union is to forge an Eastward looking strategy that strengthens its economic, political, and military alliances across the Eurasian continent, liking up with the Pacific Rim. While America is isolated, Europe and China occupy two ends of the great Eurasia landmass that is the epicenter of geopolitics today. This eastward looking geostrategy would position the EU to bring into its orbit many of the countries on the southern border of Eurasia and strengthen its economic ties on the great Eurasian continent.

9.3 The Agglomeration of Economic Activity

While the Globalization has made the world a much flatter place, in another respect the world has gotten much more spiky. Economic activity has tended to cluster in certain areas and not in others. Indeed the world is spiky. Cities are now home to half of the world’s 6.6 billion humans. By 2030 nearly 5 billion people will live in cities. The implications are enormous.

As long as knowledge necessary for technological change is codified (i.e., it can be studied in written forms either in professional journals and books or in patent documentations) the access to it is essentially not constrained by spatial distance: among other means libraries or the Internet can facilitate the flow of that knowledge to the interested user no matter where the user actually locates.

However, in case knowledge is not codified, because it is not yet completely developed, or it is so practical that it can only be

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31 Science, Cities.
transmitted while knowledge is actually being applied, the flow of knowledge can only be facilitated by personal interactions. Thus, for the transmission of tacit knowledge spatial proximity of knowledge owners and potential users appears to be critical according to Karl Polanyi (1967). For example, several firms move their research facilities to geographic areas where significant amounts of related knowledge already been accumulated in order to get easier access. Knowledge from other (industrial or academic) research facilities can be channelled via different means, such as, a web of social connections, the local labour market for scientists and engineers or by different types of consultancy relations between universities and private firms.

A large body of literature exists on the spatial extent of knowledge spillovers. At different levels of spatial aggregation (such as states, metropolitan areas, counties) in different countries and with the application of different econometric methodologies many of these studies conclude that geographical proximity to the knowledge source significantly amplifies knowledge spillovers between research and innovating firms. Strong evidence is provided both for the United States and for Europe that knowledge flows are bounded within a relatively narrow geographical range. Although certain industrial differences exists (such as for innovation in the microelectronics, instruments of biotechnology sectors proximity is more significant than for new technology development in the chemicals or the machinery industries) the hypothesis that spatial proximity is an important factor in innovation is strongly supported in the literature.

Spillover from knowledge production is positively related to the size of the region. Different types of agglomeration effects are at work to explain this phenomenon. Larger regions inhabit more firms connected by richer network linkages and as such the same knowledge generated by research in the area spills over to potentially more applications. Larger regions also offer a wider selection of producer services essential in technological innovation (information technology, legal, marketing services) contributing to a larger number of new technologies developed from the same knowledge base generated by public and private research in the area.

The new economic geography provides a framework where the spatial economic structure is endogenously determined simultaneously with equilibrium in goods and factor markets. According to Paul Krugman, the 2008 Nobel Laureate in economics,
(1991) this is a real breakthrough in economics given that before the appearance of the new economic geography no school of economics since von Thünen’s Der Isolirte Staat in the early nineteenth century had been able to build an economic model where the development of spatial structure is treated endogenously within a general equilibrium framework.

The most recent models in the new economic geography incorporate the effects of knowledge spillovers on the formation of spatial economic structure as well as provide the first attempts to explicitly integrate the two “new” schools of economics: the new growth theory and the new economic geography. The need for the integration of the two schools is clear if one takes into account that agglomeration facilitates knowledge spillovers and knowledge spillovers determine per-capita GDP growth then it is not an unrealistic assumption that spatial economic structure affects macroeconomic growth.

Therefore the relationship between agglomeration economies and entrepreneurship, innovation, employment and productivity growth are strongly supported. From a geopolitical point of view cities are becoming strategic assets in global competition due to the spiky nature of knowledge assets. Concentration of creative and talented people is particularly important for innovation according to the Nobel Prize winning economist Robert Lucas. Ideas flow more freely, are honed more sharply, and can be put into practice more quickly when large numbers of innovators, implementers and financial backers are in constant contact with one another.32 As David Audretsch (2007) has pointed out in the entrepreneurial society, this revolution it is brains not brawn that is crucial for geopolitical and economic success. While many small firms would go out of business the opportunities created for individuals would be endless. This new capital could be home to tens of thousands of high impact global entrepreneurial firms that would be created in this city.

We can illustrate the situation in a very simple model. In the classical model if we have two regions A and B. Assume that A has high income and low unemployment (old Europe) whilst B is the mirror image of this (new Europe). The classic economic model assumes that labour will move from new Europe to old Europe, and capital will move from old Europe to New Europe. Wages will fall in

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old Europe and the rate of return on capital will rise in new Europe. This process continues until the labour costs and unemployment levels are equalized. However, according to the Paul Romer (1990) we may end up with divergence not convergence of income and employment. Because of uncertainty and agglomeration economies, both capital and labour might flow from the poor region to the rich one leading to divergence and not convergence of income.

By one measure Western Europe has ten of the 100 largest cities in the world, or 10 percent. The largest are London and Paris followed with two in Europe but not in the EU, Moscow and Istanbul each with almost 10 million. The largest city in new Europe according to one measure is Katowice, Poland with 3.5 million populations. Of course, the ten to one ration also translates into other knowledge inputs, like technology, patents, innovations, human capital productivity and wealth. The number of large cities is what gives geopolitical power today as increasingly finance, education and talent are concentrated in cities that are connected to the global economy. By all measures new Europe is at a huge disadvantage in the flow of labour and capital. And therefore the EU is also at a disadvantage in the geopolitics of Eurasia.

9.4 Old Europe and New Europe in the Global Economy

France and Germany represents the heart of what Rumsfeld called old Europe. Western Europe represents both the rich countries of Europe and the technologically advanced countries and organizations integrated into the EU. One only has to visit Shanghai, China, the sixth largest city in the world to see the influence of Western Europe in the global economy. Foreign direct investment flows across Eurasia from west to east building railroads, ports, airports, buildings and factories to fuel the East Asian Miracle. Multinational Corporations from Western Europe are increasingly searching out investment opportunities around the world.

New Europe now integrated into both the EU and NATO needs to have its own agglomeration to fuel its economic engine. A new Europe that is not economically strong cannot play the vital role
that Europe needs to complete in the new geopolitical landscape of Eurasia. A new capital would help European penetration of central Eurasia and build out its economic and political ties on the global chessboard.

9.5 A New Capital

Old Europe already has several capital cities that are truly global cities – Paris and London. They are the engines of old Europe. To this we could add Essen, Milan, Madrid, Frankfurt, Naples and perhaps Athens. Brussels is the UE network hub. But the true drivers are Paris and London. The Eastern front of the Western extremity of Eurasia is made up of poor countries with no global capital. According to European Commission figures, the average GDP per head in the twelve new member states is less than 40% of the EU average. Within the Central and Eastern Europe group of members, the ratio is 35% for Romania and Bulgaria to almost 70% in Slovenia. The eastward enlargement has burdened the Union with unprecedented economic and strategic disparities.

This is at a time when the European Union should have a strong eastern presence on the Eurasia continent. The weak states of Eastern Europe put the EU at a geopolitical disadvantage precisely at a time when a strong EU should be pushing into the Eurasia continent. This is precisely what is happening at the other end of the continent. The new capital should stabilize the Balkans, create an economic revival of south central Europe and lead into Turkey by connecting the new capital with Istanbul. The emergence of a truly united Europe will have to address the highly sensitive issue of how far eastward should the European Union’s geographic scope be. How far should the union extend east? How should it interact with Central Eurasia?

We suggest that new Europe needs a 21st century capital as a gateway to the center of Eurasia. The idea is not new. Two thousand years ago the Silk Road, or Silk Route (see Figure 9.3), provided a series of trade and cultural transmission routes that were central to cultural interaction through regions of the Asian continent connecting East and West Asia by linking traders, merchants, pilgrims, monks soldiers, nomads and urban dwellers from China
to the Mediterranean Sea during various periods of time. The trade route was initiated around 114 BC by the Han Dynasty although earlier trade across the continents had already existed.

Geographically, the Silk Road was an interconnected series of ancient trade routes connecting Chang’an (today’s Xi’an). It was used to transport silk to the world plus to be a Great source of information with people getting transported to different parts of the country in China, with Asia Minor and the Mediterranean, extending over 8,000 km (5,000 miles) on land and sea. Trade on the Silk Road was a significant factor in the development of the great civilizations of China, Japan, Egypt, Mesopotamia, Persia, Indian subcontinent, and Rome, and helped to lay the foundations for the modern world. The first person who used the terms “Seidenstraße” and “Seidenstraßen” or “Silk Road(s)” and “Silk Route(s)”, was the German geographer Ferdinand von Richthofen in 1877. The Silk Route extended from southern Europe through Arabia, Egypt, Persia, India and China.

The southern route is mainly a single route running through northern India then the Turkestan–Khorasan region into Mesopotamia and Anatolia; having southward spurs enabling the journey to be completed by sea from various points. It runs south through the Sichuan Basin in China and crosses the high mountains into northeast India, probably via the Ancient tea route. It then travels west along the Brahmaputra and Ganges river plains, possibly joining the Grand Trunk Road west of Varanasi. It runs through northern Pakistan and over the Hindu Kush mountains to rejoin the northern route briefly near Merv. It then follows a nearly straight line west through mountainous northern Iran and the northern tip of the Syrian Desert to the Levant. From there, Mediterranean trading ships plied regular routes to Italy, and land routes went either north through Anatolia or south to North Africa. Another branch road travels from Herat through Susa to Charax Spasinu at the head of the Persian Gulf and across to Petra and Alexandria, from whence ships carried the cargoes to Rome and other Mediterranean ports.

This new capital would be a European gateway into Eurasia for the 22nd century. The city would be a magnet for the best and the brightest in Central Europe. It would be the home of the Creative Class, English speaking, creating a magnet for European migration. This new city would be modern, a center of technology, finance, innovation, multicultural, wealth and understanding. It would be a model for the global economy building on the best of Europe in terms of environmental protection, local food supply, efficient
transportation and new ways to live. It would be a European city with a view to the future and an orientation towards the east perhaps first connecting to Istanbul and point east along the old silk route. Such a capital would be a European city in the best tradition of European education, architecture, sustainable development and learning. The new capital would be a “much flatter place” supporting knowledge concentration and knowledge spillovers. The new capital would be knowledge oriented supporting telecom, informatics, environment, and research pillars. It may look like the techno polis or technological park with broader settings and societal attractiveness. These ideas go back to Hermann Hesse.

Of course, one could argue that Central Europe already has several capitals. Berlin, Budapest, Bucharest and Belgrade come to mind. Smaller cities include Prague, Warsaw and Krakow. And while Istanbul is outside of Europe it is often thought of as the city that indeed bridges East and West. The question that one comes up against is which one of these cities would make a good capital?

Figure 9.3 The Silk Road or Silk Routes

Source: OrexCA.com
Arguments for and against each can be made. Perhaps no city comes to mind more frequently than Berlin. It has played that role for more than a century. From a geopolitical perspective it is on the arc connecting Paris, Berlin, Warsaw and Kiev into NATO and Eurasia. However, Berlin, while a large city is German, is not multicultural, is isolated from the rest of southern Europe, and has historical reasons why it would not easily qualify.

Prague is a beautiful city, full of history, culture and education but small. Bucharest like Prague is small and does not have the political economic or technological capabilities needed. It is too far west. Belgrade is in a similar situation. We now come to Budapest. Budapest a beautiful city on the Danube in the Carpathian Basin has strong ties to Eurasia. It is part of a larger agglomeration that includes Vienna and parts west. It played important roles in the history of Eurasia for over a thousand years. It would make an interesting candidate. On the negative side Budapest is difficult to govern and is corrupt.

This leaves us with a question. Should this new capital be a green field site? If China can build a ten million population city in a decade, could Europe not do the same? The new capital would immediately face the problem of nationalism and an eternal squabble over who
should win the billions needed for such an adventure. However, several things are clear. First, the city should not preside in any one country. Second, it should stabilize the Balkans and third become an engine of economic development in South Eastern Europe as it connects to central Eurasia.

Historically the eastern edge of the Carpathian basin has had strong contacts with Eurasia. Both the Early Empires of Central Asia and the trade routes over the years had contact with the Roman Empire, and the formation of Hungary, Finland and Turkey. As McGovern makes clear in *The Early Empires of Central Asia*, Central Asia has long played a prominent part in the culture history of mankind both as a center where many customs have developed and as a mediator between all the major cultures centers of the ancient world. For hundreds of years in the middle ages the Carpathian basin served at the geopolitical center of eastern Eurasia. There were two centers, one in present day Cluj, Romania, (Kolosvar) and the other one in Timisoara, Romania (Temesvar). This historical region offers

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**Figure 9.4 Proposed “New” Capital City**

![Map of proposed new capital city](Source: Perry-Castañeda Library Map Collection, University of Texas Libraries)
at least two jumping off points for our capital. In the north we have Debrecen, Hungary and Cluj Romania with inroads into Aston and Urchi in Central Asia.

South Central Europe offers an ideal location from which to start thinking about a new capital for new Europe. Historically the area bounded by Szeged, Hungary, Arad and Timisoara, Romania, and Subotica, Serbia (Figure 4). These four cities are some of the most productive and active cities in Southern Europe. The central argument for a new city is that most of the other large cities in new Europe are already built up and would be very difficult to alter. The region is multicultural already with people from different cultures already existing side by side. By building in three countries we have eliminated the need for any one country to be isolated and we have picked countries that encompass some of the poorest regions of the new Europe. Finally, it is through here that the new highways, telecommunication lines, pipelines and rail lines will be built in the future.

The region, about the size of Chicago, has a population of about 1.5 million inhabitants. It has some of the highest education and technology skills in the region. What would this capital look like? The capital would aspire to be the first new global city in Europe that would be a leading example of a high technology sustainable humane city. A modern invention built around a historic region of new Europe. The city could be a magnet for investment from all over Eurasia and the Middle East, as it would be the eastern most window of the EU facing Eurasia.

9.6 Public Policy

The European Union already has a regional policy the goal of which is to increase growth and create jobs. This was set out in Article 158 of the Treaty. The community shall aim at, “reducing disparities between the level of development of the regions and the backwardness of the least favoured regions as islands, including rural regions.” The Union has set aside 336.1 billion Euros for 2007-2013 to help close this gap. While 79 percent of this fund is allocated to countries that fall below 75 percent of the EU standard of living.
the rest of the funds go to regions in other countries that are below national standards. Of course this leads to the question, is this the best way to allocate these funds? Will this leads to the greatest social economic and political benefit for the EU?

Returning to our question that motivated this essay it does not appear that SMEs of the smaller and backward regions of the EU and especially new Europe will be able to escape the trend of globalization. In other words, they will most likely not be able to compete on their own. They need to be strengthened. The new growth theory suggests that the best way to raise living standards and increase competitiveness is to agglomerate assets. The concentration of knowledge, human capital and financial assets would also lead to more entrepreneurship and especially high impact entrepreneurship that creates most of the jobs.

In fact, the spreading of regional funds too thin might result in lower standards of living and lower growth than if the funds were concentrated. This is especially true if people and capital flow from these poor regions in new Europe to rich regions in old Europe. In that case the public money of the EU would be moving in a direction counter to the flow of private funds. Attila Varga has shown for Hungary that even R&D investment that is allocated to too many universities and regions does not produce the same results as if it were concentrated in one region. If investment is concentrated in one region living standards would be higher for all regions than if the funds are evenly spread out. This is especially important if this investment would reverse the direction of private funds.

The policy choice for the Union is stark. Either lag behind, or concentrate the regional funds into building a capital for new Europe, using the stabilization fund as a strategic vehicle to bring the region of south Eastern Europe up to global standards. The benefits of this would be immensely beneficial to the European Union. First, by giving new Europe a global capital the strategy would stabilize the whole region making it a global competitor. Second it would be beneficial to the EU by raising the level of development in new Europe closer to EU standards faster. Finally, it would give the EU a window on the eastern front of Eurasia from which to reach the markets of middle Eurasia and better interact with the whole continent. This geopolitical regional strategy would greatly strengthen Europe’s geopolitical position in Eurasia in the 21st Century.
9.7 References

10. Presentation of the authors

**Zoltan J. Acs** is University Professor at the School of Public Policy and Director of the Center for Entrepreneurship and Public Policy. He is also a Research Scholar at the Max Planck Institute for Economics in Jena, Germany, and Scholar-in-Residence at the Kauffman Foundation. He is co-editor and founder of Small Business Economics, the leading entrepreneurship and small business publication in the world.

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Dr. Acs is a leading advocate of the importance of entrepreneurship for economic development. He received the 2001 International Award for Entrepreneurship and Small Business Research, on behalf of The Swedish National Board for Industrial and Technical Development. He has published more than 100 articles and 20 books, including articles in the *American Economic Review, Review of Economics and Statistics, Kyklos, Journal of Urban Economics, Economica, Research Policy* and *Science Policy*.

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the Swedish Foundation of Small Business Research named him the Entrepreneurship Researcher of the Year and the Organization and Management Division of the Academy of Management presented him with an award for a Distinguished Career of Scholarly Achievement. His book, Organizations Evolving, won the Academy of Management George Terry Award as the best management book published in 1998-99, and was co-winner of the Max Weber Award from the American Sociological Association’s Section on Organizations, Occupations, and Work.

**David B. Audretsch** is a Distinguished Professor and holds the Ameritech Chair of Economic Development and is the Director of the Institute for Development Strategies at Indiana University. He is also the Director of the Max Planck Institute of Economics in Jena, Germany. He also serves as an Honorary Professor at the Friedrich Schiller University of Jena, Research Professor at Durham University, an External Director of Research at the Kiel Institute for the World Economics, and is a Research Fellow of the Centre for Economic Policy Research (London).

Audretsch’s research has focused on the links between entrepreneurship, government policy, innovation, economic development and global competitiveness. Professor Audretsch is ranked as the 21st most cited scholar in economics and business, 1996-2006 and has been recognized as being among the 60 most important economists of all time. He has received support for his research from a broad spectrum of foundations and government agencies, including the Ewing Marion Kauffman Foundation, the Advanced Technology Program (ATP) of the National Institute of Standards and Technology (NIST), the National Academy of Science, U.S. Department of Education, and the National Science Foundation. His research has been published in over one hundred scholarly articles in the leading academic journals. His books include *Entrepreneurship and Economic Growth*, with Oxford University Press in 2006 and *The Entrepreneurial Society*, also with Oxford University Press in 2007. He is co-founder and co-editor of *Small Business Economics: An Entrepreneurship Journal*. He was awarded the 2001 International Award for Entrepreneurship and Small Business Research by the Swedish Foundation for Small Business Research. In 2008, he was awarded an Honorary Doctorate Degree by the University of Augsburg.
He has consulted with the World Bank, National Academy of Sciences, U.S. State Department, United States Federal Trade Commission, General Accounting Office and International Trade Commission as well as the United Nations, Commission of the European Union, the European Parliament, the OECD, as well as numerous private corporations, state governments, and a number of European Governments. He is a member of the Advisory Board to a number of international research and policy institutes, including the Zentrum fuer Europaeisch Wirtschaftsforschung (ZEW, Centre for Economic Research), Mannheim, the Deutsches Institut fuer Wirtschaftsforschung (German Institute for Economic Analysis), the Basque Institute for Competitiveness, the Deutsche Telekom Foundation, and the Swedish Foundation for Research on Entrepreneurship and Small Business.

William J. Baumol was born on February 26, 1922 in New York City. He received his BSS at the College of the City of New York in 1942 and his Ph.D. at the University of London in 1949. He is the Harold Price Professor of Entrepreneurship and Academic Director of the Berkley Center for Entrepreneurial Studies in the Stern School of Business at New York University; and senior economist and professor emeritus at Princeton University. He is past president of the American Economic Association, the Association of Environmental and Resource Economists, the Eastern Economic Association, and the Atlantic Economic Society. His honours and awards include twelve honorary degrees and membership in the U.S. National Academy of Sciences, the American Philosophical Society, the Accademia Nazionale Dei Lincei (Italy) and the British Academy.

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Sylvain Boko is the director of the Minor in International Development and Policy at Wake Forest University. His teaching and research interests focus on economic growth and development, international development and policy, international trade, and current issues in African development. In 2008 he was awarded a Fulbright fellowship to Uganda where he will conduct research on the topic “Post-Conflict Reconstruction and Development: The Role of Decentralized Governance.” He will teach at the Makerere University Institute of Social Research in Kampala, Uganda.

Dr. Boko has a special interest in economic development policies in Benin, West Africa. He sponsors a program that gives students the opportunity to participate in an overseas summer program in Africa. The three hour course combines classroom instruction with service-learning and home-stays in Benin.


His interest in micro-enterprise area is an outgrowth of his belief that “Teaching business skills is sort of the meat and potatoes of poverty reduction.” He is working with students this summer to test an entrepreneurship education model in Benin. He is interested in investigating the issues related to transferring models to a different culture, for instance, translating materials from Spanish to French, the language of Benin, and adapting case studies for a different audience and culture.
Elizabeth (Betsy) Gatewood, Ph.D. is the Director of the University Office of Entrepreneurship & Liberal Arts at Wake Forest University. The Office is focused on creating and sustaining an environment that fosters entrepreneurial thinking across the entire campus community. She most recently served as the Jack M. Gill Chair of Entrepreneurship and Director of The Johnson Center for Entrepreneurship & Innovation at Indiana University. She has been named as one of the top ten best entrepreneurship center directors in the United States by Entrepreneur Magazine.

She is a member of the “Diana” project, a research study of women business owners and equity capital access, funded by the Kauffman Center for Entrepreneurial Leadership, the US Small Business Administration, and the National Women’s Business Council. She and her colleagues were winners of the FSF-NUTEK International Award for scientific work of outstanding quality and importance in the field of entrepreneurship. Her work in entrepreneurial cognition received the National Foundation of Independent Business Award for best paper at the 2001 Babson-Kauffman Foundation Entrepreneurship Research Conference. Her research has been published in the Journal of Business Venturing, the Journal of Venture Capital, Entrepreneurship Theory & Practice, the Journal of Small Business Management, and Entrepreneurship and Regional Development.

Dr. Gatewood serves on the Board of Directors of Delta Apparel, Inc. (AMEX:DLA). She is a past chair of the Entrepreneurship Division of the Academy of Management. She received the 1996 Advocate Award for outstanding contributions to the field of entrepreneurship from the Academy of Management. Dr. Gatewood was named the Texas Women in Business Advocate of the Year by the U.S. Small Business Administration. She serves on the Advisory Board for Spring Mill Ventures, a venture capital firm of the Village Ventures network. She served on the National Advisory Board for Entrepreneurship Education of the Kauffman Foundation.

Prior to her arrival at Indiana University in 1998, Dr. Gatewood was the Executive Director of the Gulf Coast Small Business Development Center Network, an organization providing training and consulting services to entrepreneurs and small business owners in the 32 counties of the greater Houston region. Dr. Gatewood founded and served as director of the Center for Business and Economic Studies at the University of Georgia from 1983-1989. She taught at the Nijenrode Institute of Business in The Netherlands. She holds a BS in Psychology from Purdue University and an MBA in Finance and Ph.D. in Business Administration with a specialty in strategy from the University of Georgia.
Bengt Johannisson, Ph.D was the first professor in Entrepreneurship and Business Development in Sweden. 1989-99 he held a chair at Lund University, also serving at Växjö University. In 1989 he was as well professor in Innovation and Strategy at Roskilde University in Denmark. 1999-2007 he held a chair Entrepreneurship and Business Development at Växjö University. He has also been a visiting research fellow at Aston University, England, York University, Canada, Vienna University of Economics, Austria, University of Insubria, Italy and Stanford University, USA. At present Bengt Johannisson is a part-time professor at Växjö University and Jönköping University, its International Business School.

For three decades Bengt Johannisson was the head of entrepreneurship research at Växjö University. With Hans Landström, now at Lund University, Bengt Johannisson founded the Scandinavian Institute for Research in Entrepreneurship (SIRE) whereby three universities in Southern Sweden joined forces in the entrepreneurship research area. Bengt Johannisson was the first Vice-president Sweden on the board of directors of ECSB and was 1993-94 the chairman of the ECSB education-training working group.

For more than two decades Bengt Johannisson organised undergraduate programmes in Entrepreneurship and Small Business Development at Växjö University. These programmes, for a long time unique in the Swedish setting, included internship in regional small-scale businesses. In the mid-1990ies Växjö University was ranked fourth in the world outside North America as regards academic research education. Then Bengt Johannisson and colleagues were commissioned to write a national report to the Swedish government on entrepreneurship education, from primary school to the university level.

1995-2007 Bengt Johannisson was the director of the European Doctoral Programme in Entrepreneurship and Small Business Management jointly with professor José Veciana at Universitat Autònoma de Barcelona, Spain. 2002-2005 Bengt Johannisson organised a national doctoral programme in Entrepreneurship and Innovation, involving 12 Swedish universities.

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What does globalisation mean for small and medium-sized firms, SMEs, innovation and entrepreneurship? One conclusion is that virtually every type of firm could participate on a global market. One reason being the new technology which means that even very small local firms have new possibilities. On the other hand, this also means increased competition. Summing up there are new opportunities as well as new challenges and threats for all companies acting in a globalised world.

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The authors are all well-renowned international and national researchers in the field of innovation, entrepreneurship and SMEs. Zoltan J Acs, Howard E Aldrich, David B Audretsch, William J Baumol, Sylvain Boko, Elizabeth J Gatewood, Bengt Johannisson, Anders Lundström (ed), Paul D Reynolds, Charles Sabel and A Roy Thurik. The main author of each chapter has been awarded The FSF-Nutek Award on entrepreneurship and small business research, from 2009 renamed Global Award for Entrepreneurship Research.
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