

Speech of Mr. Sergio Arzeni, Director of the OECD Centre for Entrepreneurship, SMEs and Local Development (CFE) for the APEC High-Level Meeting on “Driving SMEs’ Growth to Promote Local Development” (Chinese Taipei, 30-31 March 2008)

Promoting Local Innovation and Entrepreneurship

Background Considerations

Until few decades ago, most speakers would have probably dealt with the two concepts of innovation and entrepreneurship in a distinct way. Still today “innovation” is often associated in the collective imagination with the result of genius or inspiration, the exceptional outcome of talented work that can hardly be replicated. Entrepreneurship, on the other hand, is frequently seen as mere business formation, whereas it clearly goes beyond the mere metric of the start-up rate and has a strong link with innovation. Management theorist Peter Drucker was the first to highlight this nexus in his seminal work “Innovation and Entrepreneurship” (1985)¹ where he asserted that “innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service”.

Innovation and entrepreneurship are therefore closely linked. But why is it important to promote them at the local level? Would not it be enough to design national comprehensive strategies for innovation and entrepreneurship? The answer is probably no.

One of the biggest paradoxes of globalisation is that national and international competitiveness rest more than ever before on local factors that cannot be matched by distant rivals. In the early 1990s Michael Porter brought out how the main competitors in any industry would always come from a restricted number of countries. This led him to talk of the “competitive advantage of nations” and of four key elements affecting the ability of nations to compete in a specific industry at the global level: factor conditions; demand conditions; related and supporting industries; firm strategy, structure, and rivalry.

But if we delve a bit further, we soon realise that national industry competitiveness is often built upon geographically limited agglomerations. Italy’s strong reputation for fashion leather products (e.g. shoes, bags, etc.) hinges on an industry that is strongly concentrated in the region of Tuscany. Similarly, in the high-tech sector of biotechnology the United States and the United Kingdom take the lion’s share with research and production being concentrated around few locations hosting world-renowned research universities (i.e. San Francisco’s Stanford, Boston’s MIT and Cambridge University).

These agglomerations have come to be known as clusters and epitomise today the importance of entrepreneurship and innovation at the local level because of the contribution they give to business productivity and innovation. Both are strengthened in clusters by a host of factors: better access to skilled workers and competitive suppliers; access to specialised information; linkages and complementarities between industries located at different stages of the production chain; eased access to credit and, especially important for knowledge-intensive industries, equity finance; access to public goods supplied as a result of the large demand originated by the cluster (e.g. vocational programmes, specific infrastructure, etc.); etc.

For similar reasons, clusters foster entrepreneurship and business formation more in general. First of all, there is an imitation and motivation factor. People, especially skilled workers with some experience, feel motivated to imitate successful previous colleagues or employers and start up a new business. Secondly, this chance is strengthened by the fact that clusters develop around several industries, which increase the chance to find an untapped market niche or one where the likelihood of

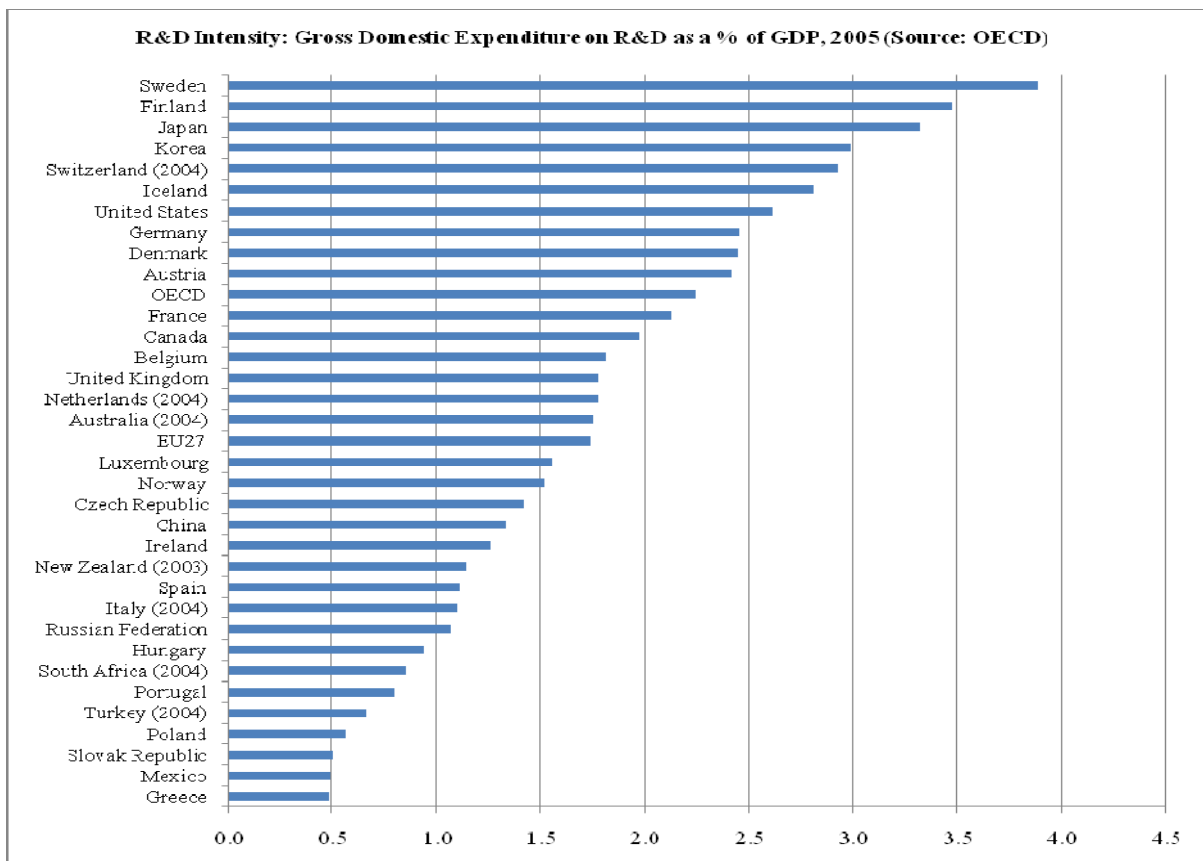
¹ P. Drucker, 1985, *Innovation and Entrepreneurship: Practice and Principles*, Heinemann: London.

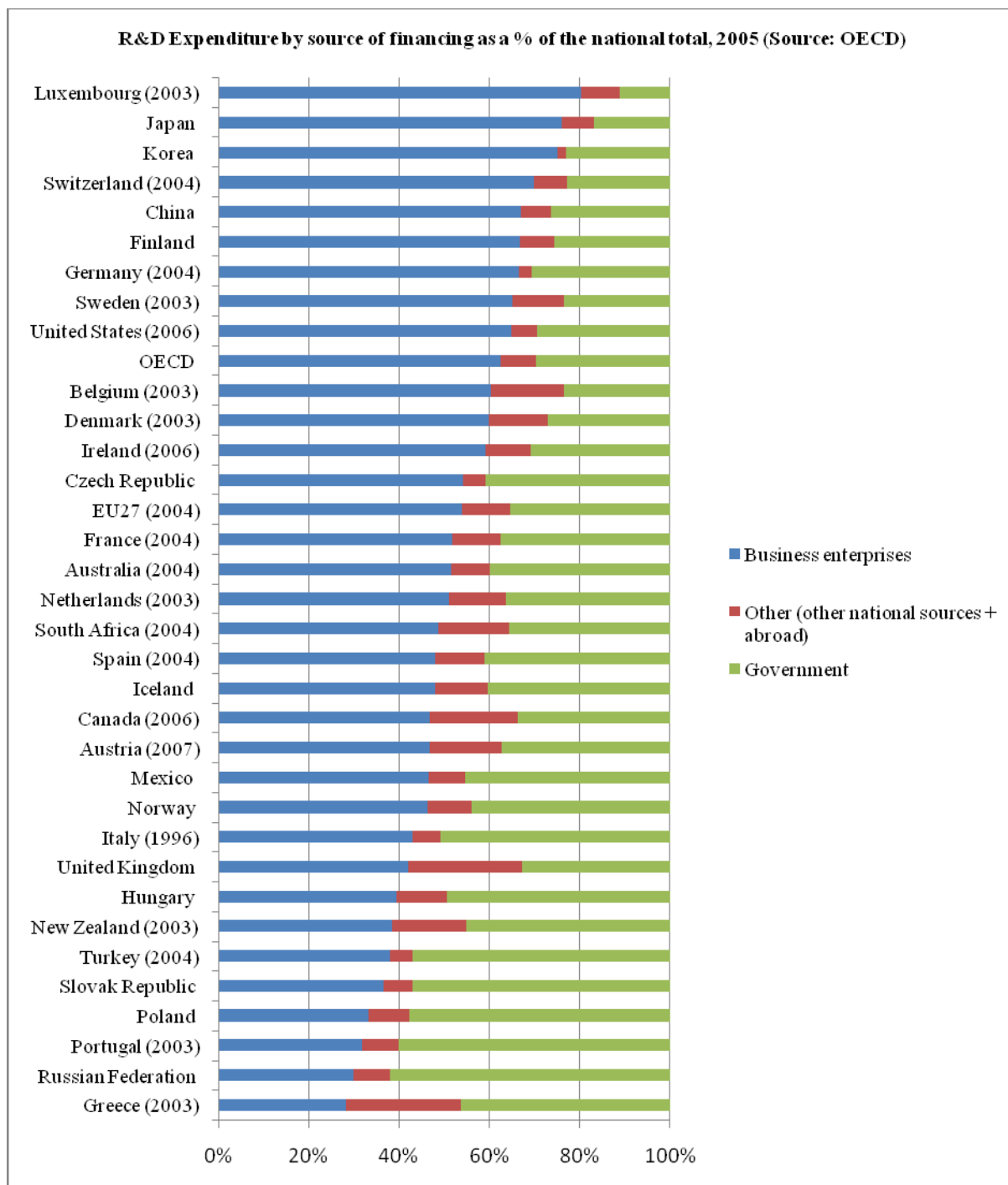
success is reckoned higher than elsewhere. Thirdly, the presence of many enterprises in the same or related industries provides a good benchmark and makes it easier to assess business performance. Fourthly, information asymmetries and other transaction costs are lowered by geographical closeness and repeated interactions, which generate trust and social capital that are widely deemed crucial to the success of a cluster.

Promoting innovation and entrepreneurship at the local level cannot therefore overlook the concept of cluster and the presence, if any, of local clusters. In practice, this means recognising what local industries have the strongest potential to compete nationally and globally and set policies that encourage innovation in these as well as other industries.

To this end, *public investment in R&D* is as important as *private R&D*. There is little scope for public R&D if local enterprises are not ready to receive and absorb the produced knowledge by integrating it with their own research efforts. This implies that where the local innovation base is low, small businesses may need to “learn to innovate”, which means being introduced to the benefits of innovation for business productivity. Where, on the other hand, local university research is mainly oriented towards basic research, pre-competitive research paving the way to research commercialisation may be in need of policy support. By this twofold approach, policymakers are headed to setting the conditions for the emergence of both a demand and supply of R&D.

The following two graphs give first the overall R&D intensity in OECD countries and some other important non-Member economies and then, in light of the importance of complementarity between publicly and privately funded R&D, the corresponding distribution at the country level.





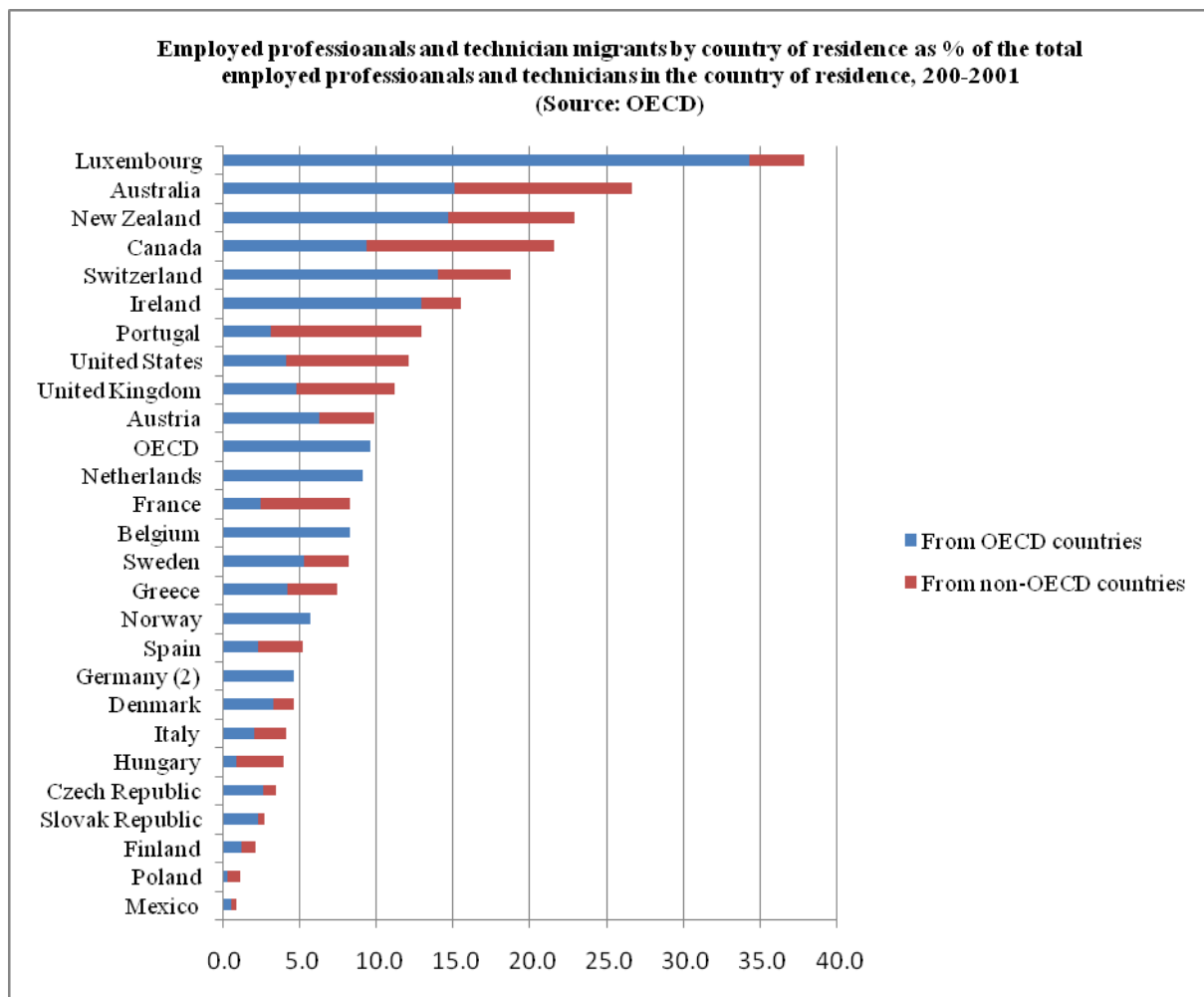
University-industry linkages are also of primary importance. It is now recognised that innovation systems transcend the concept of R&D and innovation is also well stimulated through constant interactions and networking between firms, universities and research laboratories in which non-R&D-intensive SMEs can also participate. In particular, there is very often a need to increase the interactions between the agents within the local innovation system and make these interactions accessible to SMEs. A concrete example of policy in this sense consists in encouraging the mobility of researchers between research organisations and enterprises through, for instance, part-time agreements, labour cost sharing, joint research projects, etc. *Inter-firm linkages* at a more general level are also beneficial to innovation. Supplier recruitment by large companies usually results into SME upgrading through exposure to training and more advanced technologies. But SMEs can also upgrade by working together. For instance, consortia or other forms of networks can enable the access

to complex costly technologies that individual small enterprises would not be able to afford on their own.

The attraction of talented labour is proving as important as that of domestic and foreign investment for local innovation and economic development. In the past, local development strategies overly focused on the indiscriminate attraction of inward FDI have sometimes resulted into the emergence of local “branch-factory” economies, i.e. economies where most FDI consisted of manufacturing plants whereas knowledge-intensive activities (e.g. R&D, management, marketing, etc.) remained located elsewhere. On the other hand, attracting highly qualified workers is key to strengthening the quality of investment, be it foreign or domestic, and embedding it into the regional economic system through processes of company spin-offs and local supplier recruitment.

In order to attract talents, a set of different conditions needs to be in place. The location needs to be able to offer interesting career prospects and for this to be possible a dense network of high-profile enterprises must be available. Salaries are clearly important, but so is a stimulating surrounding professional environment. Increasingly, attracting talented labour goes beyond the labour market or the workplace itself to embrace the entire new dimension of ‘territorial attractiveness’, which involves working on a place that has more to offer than just good jobs (e.g. interesting cultural life, green areas for sport and relax, social heterogeneousness, etc.).

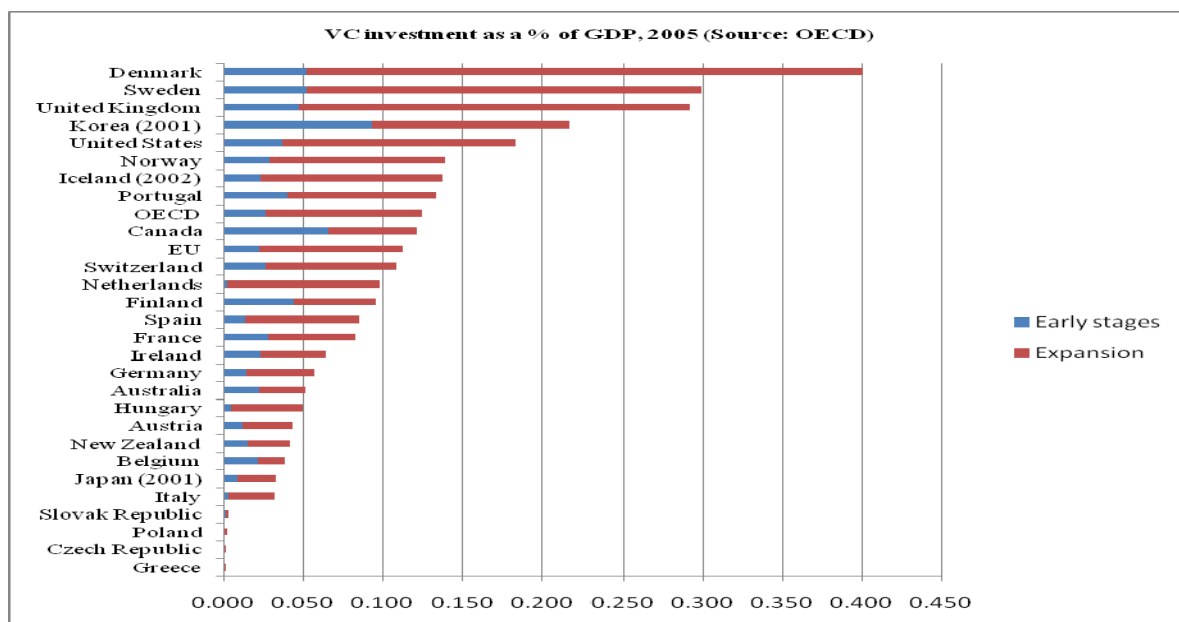
The chart below gives a proxy of the contribution of foreign qualified workers to OECD economies. As evident from the graph, talent attraction turns out particularly important for small economies that are more likely to be faced with a shortage of skilled labour.



Business development services (BDS) continue to be important too. For instance, *business incubators* have the potential to assist entrepreneurs with both start-up and business development, thereby contributing to local entrepreneurship and innovation. As known, incubators seek to provide workspace (often on preferential and flexible terms) for a specific industry or type of firm while concentrating spatially the supply of utilities, services, facilities and equipment. The services provided can include various forms of business planning and managerial advice, office facilities, finance and accounting, legal services, etc. A variant of business incubators consists in technology incubators. The latter may take a range of institutional forms, operating either as integrated or separated organisations within science parks, universities and innovation centres. The types of service are very similar to those of traditional incubators, but the technology-oriented variant more often provides technology-oriented advice on legal issues such as intellectual property rights. The relevance of technology incubators is demonstrated by the fact that one third of the US-based incubators belong to this specific category.

Finally, finance can but play a prominent role. For entrepreneurship and innovation to thrive, not only does credit need to be accessible, but *equity finance* is also preferably to be available. Business angel networks and venture capital funds are crucial to feeding innovation and business development, especially in knowledge-intensive sectors, as well as to fuelling high-growth firms (i.e. firms able to maintain significant annual growth rates over an extended period of time)², which despite being a limited share of the overall enterprise population contribute disproportionately to employment creation.³ Interestingly, these forms of equity finance have a strong local dimension because business angels and venture capital funds value highly the possibility of monitoring closely the performance of the invested business, giving advice when needed and following-up on such advices.

The graph below shows that Nordic countries (Denmark and Sweden), the United Kingdom, Korea and the United States outperform the other OECD countries in terms of venture capital investment as percentage of GDP. What the chart does not show, however, is that in 2005 the United States (with 39%) and the United Kingdom (with 11%) attracted half of all OECD venture capital and that high-technology firms attracted 40% of the overall OECD venture capital investments.



² According to OECD, a firm is high-growth if, starting from a minimum base of 10 employees, it records an annual growth (either turnover or employment) over 20% for at least three subsequent years.

³ An OECD study on the topic (OECD, 2002, *High-Growth SMEs and Employment*, Paris) found that in countries such as France, Italy, the Netherlands and Greece, between 50% and 60% of employment gains can be associated with high-growth firms.

To summarise, this section has given a sample of the possible policies to promote entrepreneurship and innovation at the local level, together with some key relevant national statistics on the topic showing which countries are doing better than others. However, more specific guidelines and recommendations cannot exempt from a previous diagnostic of the strengths, weaknesses, challenges and opportunities of a specific local innovation system. That is what the OECD Centre for Entrepreneurship, SMEs and Local Development (CFE) seeks to do in the frame of the recently launched OECD Innovation Strategy.

The OECD Innovation Strategy and the Contribution of CFE

Today innovation lies at the core of the OECD work. At the 2007 Ministerial Council Meeting, OECD Member countries agreed that innovation is key to national competitiveness and productivity. Consequently, Ministers mandated the OECD to identify, analyse and produce a set of effective innovation policies. More specifically, Ministers call for facts and evidence to depict and compare innovation performance, as well as for a better grasp of the complex interaction of the different policy tools and their effectiveness. Far from having only a national or local dimension, innovation can help tackle global challenges such as climate change, energy security and global health.

As part of the Heiligendamm Process, the OECD Innovation Strategy is also strongly open to emerging economies such as those of APEC. The OECD recognises the relevance in the fields of research, science and innovation of emerging economies and strongly welcomes international collaborations with them on any innovation-related issues.

Based on these assumptions, the OECD Innovation Strategy was launched at the end of 2007 and aims to provide:

- *A cross disciplinary mutually reinforcing package of good policy practices, guidelines and policy recommendations* to boost innovation performance.
- *A framework that could be used to monitor and review the innovation environment* and the performance of the innovation system.
- *A way to enhance existing mechanisms and forums for international discussion and co-operation*, including strengthened dialogue, *especially with emerging economies* and other important stakeholders.
- *Analysis clarifying the links between the policy domains of a comprehensive strategy*, such as those between science, innovation and entrepreneurship.
- *Steps towards the development of better metrics* to identify, monitor and benchmark innovation performance.

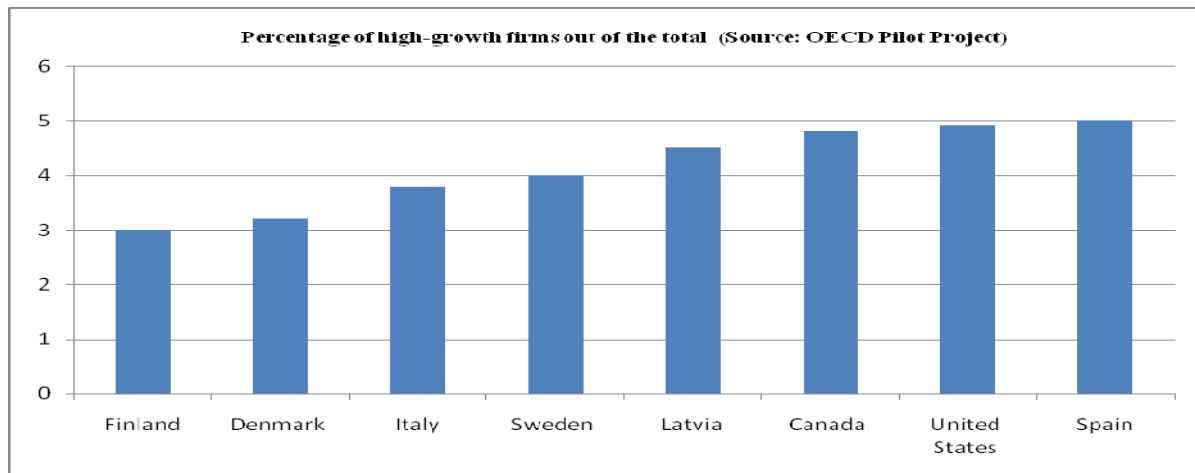
In practical terms, the Innovation Strategy aims to be a comprehensive exercise crosscutting the entire Organisation in the same way as it did the mid-1990s OECD Jobs Strategy and which, in a similar fashion, intends to cast light on the following three crucial elements:

- i. *New facts and evidence* depicting and comparing innovation performance in OECD countries, based on statistical, empirical and thematic analysis.
- ii. *Explanations for the differences in performance across OECD countries*, pointing to the main policy considerations for enhanced innovation performance.
- iii. *A comprehensive policy strategy to strengthen innovation*, involving good policy practices, guidelines and generally applicable policy recommendations to boost innovation performance.

Given the close relationship between innovation and entrepreneurship, the CFE Directorate contributes to the OECD Innovation Strategy in three different ways: a) analysis of high-growth SMEs; b) local innovation system and entrepreneurship reviews; c) social innovation and social entrepreneurship.

Analysis of high-growth SMEs

Data on high-growth enterprise are still scarce. An OECD pilot project on entrepreneurship indicators estimates that the percentage of high-growth firms out of the overall business population is normally no more than 5% at the national level. The table below summarises this information for a small number of countries being examined in the context of this project.



The Working Party on SMEs (WPSME) as an integral part of the CFE directorate is carrying out a series of studies on high-growth SMEs. In particular, the WPSME project aims to investigate: a) the role of innovation and intellectual assets as drivers of SME growth; b) the financing of innovative and fast-growing SMEs.

The first phase of this project was executed in the second half of 2007 and mainly consisted of a literature review on the topic of high-growth SMEs and innovation. Among the main findings, this study highlighted that fast business growth is often the result of the exploitation of a novel technology or market opportunity which had not been detected before. Moreover, if we make the distinction between novel (i.e. new to the industry) and incremental (i.e. new to the firm) innovation, the former has a special positive correlation with employment growth whereas the impact of the latter is more muted with regard to both employment and sales growth.⁴

Among the factors that most affect the relationship between innovation and high growth are business practices and knowledge acquisition. An OECD study singled out five aspects which impact the most on the ability of SMEs to become high-growth: innovation; market and technology links; organisation and managerial structure; teamwork; and networking.⁵ One of the main findings of this study was that few high-growth SMEs have formal R&D departments but they rather rely on networks with other (larger) enterprises and public institutions in order to innovate. Indirectly, therefore, the study stressed the importance of knowledge spillovers for innovation in SMEs, which is confirmed by the academic literature on clusters and business linkages.⁶ The study also found that in high-growth SMEs the main driver of innovation is customer satisfaction and product quality, rather than cost reduction. At the

⁴ Freel M. and P. Robson, 2004, "Small Firm Innovation, Growth and Performance", *International Small Business Journal*, 22(6), pp. 561-575.

⁵ OECD (2002), *High-growth SMEs and employment*, OECD: Paris.

⁶ See, for instance: Giuliani E., 2005, "Cluster Absorptive Capacity: Why Do Some Clusters Forge Ahead and Others Lag Behind," *European Urban and Regional Studies*, 12(3), 269-288.

internal management level, teamwork and marked delegation of tasks are the norm in fast-growing businesses, as is a dense network of external relationships with customers, suppliers, distributors and public institutions. This confirms the importance for an enterprise to be embedded in a thriving business environment like, for instance, that of a cluster in order to innovate.

The second phase of the WPSME project will run over the first half of 2008 and involve the preparation of a series of thematic country studies in five high-growth SME-related areas: innovation, business practices, networking, intellectual assets, and financing. The findings of the country studies will feed into a comparative cross-country analysis.

Local Innovation System and Entrepreneurship Reviews

The CFE Local Economic and Employment Development (LEED) Programme is launching a series of peer reviews in regions that are interested in a “check-up” of the local innovation and entrepreneurship system together with an overview of international policies and tools that are proving efficient elsewhere and could therefore provide inspiration for local policies aimed at entrepreneurship and innovation.

Each review gives an assessment of current policies, recommendations for their future development and international learning models that help illustrate how other places have addressed similar challenges and put similar recommendations into practice. There aims to be a strong focus on achieving regional policy coherence through the development of an effective innovation and entrepreneurship strategy and effective policy delivery framework that bring together all the key local stakeholders.

Special attention in these reviews is devoted to the thematic areas of: a) human capital (skills training, vocational education, attraction of talented labour, labour market functioning); b) enterprise (new start-ups, SMEs, high-growth SMEs, large enterprises, inward FDI); c) research organisations (research funding, collaborations and commercialisation, technological and science parks, research infrastructure); d) governance (policy design and delivery arrangements, strategy development and evaluation, networks and partnerships, divisions of responsibilities).

The first of these reviews has recently been completed in the Spanish region of Cantabria and others are being explored in various regions across the OECD. Some first general lessons can be inferred from this original review. Regions such as Cantabria that are small and located in developed economies need to raise significantly the share of GDP invested in R&D if they are to remain competitive in a world where the relocation of low value-added activities becomes increasingly easier. Far from concerning the only public sector, this effort must involve the private sector as well, with business-driven R&D as important as public R&D. In addition to supporting R&D investment, it is imperative that the connectivity among regional organisations be improved. The linkages between industry and research are to be strengthened and regions, especially small ones, need to look beyond their geographical boundaries to grow and compete at the international level. Public funding is more efficient if targeted to research teams or potential centres of excellence that have the strongest research commercialisation potential. Finally, innovation support is not synonymous with high-tech. Any industry can be innovative and local innovation policies need to keep an all-inclusive approach in which traditional manufacturing industries are also addressed, especially those where the region has a proven track-record of good industrial performance. In the case of Cantabria, for example, this meant the automotive sector.

Social innovation and social entrepreneurship

CFE is also planning to work on the new dimension of non-technological factors of innovation. In the public sector governance innovation is seen as a way to increasing efficiency in the supply of public services. Innovative services are often being designed and delivered in partnership with the non-profit

sector. Social enterprises, for instance, are producing new non-standardised welfare services aimed at matching an increasingly diversified demand which the public sector finds it difficult to satisfy.

Conclusions

The Innovation Strategy plays a pivotal role in the work of the OECD today. As mentioned above, far from involving only Member countries, the Innovation Strategy is much open to a dialogue with non-Member emerging economies and other international organisations. Such a dialogue will provide a forum for a positive exchange on topics critical for growth of successful knowledge economies and the promotion of innovation-friendly business environment, also taking into account the needs of SMEs.