

**I am pleased to be here on behalf of the OECD as part of our long-term engagement with Catalonia on innovation policy.** Some of the projects undertaken together include: *Higher Education in Regional and City Development: Catalonia, Spain* (2011); *OECD Reviews of Regional Innovation: Catalonia* (2010); and *Promoting Entrepreneurship, Employment and Business Competitiveness: The Experience of Barcelona* (2009).

**Innovation is one of the main drivers of economic growth in OECD countries and region, which is why the OECD developed its Innovation Strategy.** The Strategy highlights that innovation policy should recognise innovation in a broad sense. Innovation includes new and improved products and processes as well as organisational and marketing methods. The battery of policy recommendations in the strategy are areas that Catalonia has incorporated in its different science, technology and innovation plans as well as initiatives like the Catalan Agreement on Research and Innovation or the recent Poblet Declaration.

**But what are the realistic policy priorities in tough fiscal times?** In prior crises in the 1990s, countries like Finland and Korea invested in innovation and came out ahead afterwards. Catalonia was able to keep up that public R&D spending until 2011 until cuts became visible given declines in R&D performed by the public and university sectors. Of course maintaining a financial commitment to innovation is easier said than done.

**Catalan firms have been cutting back on R&D spending.** Among firms, the annual drop in business R&D intensity of between 4.4% and 5% from 2009-2011 is a bigger relative decline than in Spain overall. This investment is sensitive to the sector, but this general yardstick is indicative of a problem. To get to the level of international high-tech hubs, like some of those represented at this seminar, Catalan firms have a long way to go.

**As noted in prior OECD reports on Catalonia, the innovation system requires a more effective interface between the strong knowledge/research base with firms.** Catalonia has a wealth of research centres and universities. There have been increasing expectations for the third mission of both universities and the performance of research centres. Some universities, due to their vocation, culture or management style, have been more effective than others at interfacing with firms. While often their third mission performance is judged by indicators such as patents, the greatest impact on jobs is to be found by research that addresses the needs of the existing firm base allowing them to preserve or create jobs much quicker than a patent. Identifying such opportunities is of course one of the main goals of this Knowledge, Territory and Innovation Platform.

**Let's not forget that innovation can take place without R&D.** Investments in intangible assets are increasingly important for innovation. In knowledge-intensive countries like Finland, Sweden and the United States, such investments surpass investments in physical capital such as machinery and equipment. Technological innovation and non-technological innovations often go hand-in-hand, since innovative firms seek to innovate across the board. But policy instruments tend to emphasise the technological innovations while organisational and marketing methods may have even more immediate job impacts. Catalonia's strengths in creativity and design, for example, are further innovation assets.

**Reducing the costs of doing business, easing access to finance, or creating other business opportunities can all promote private innovation spending.** Efforts for regulatory simplification, where appropriate, involve limited direct public expenditures but free up funds for firms to apply towards more productive uses. Access to finance has been restricted since the crisis, but there are some instruments such as loan guarantee schemes that help better leverage private funds than other forms of direct public aid. Open data initiatives, such as promoted by the city of Helsinki, are allowing public data to help firms be more competitive, through more targeted marketing or information to create better products and services.

**Much of job creation is in the service sector, yet innovation policies are generally focused on a manufacturing model.** The market failures that policy must address in services are often less obvious. And the sector is broad with wide variations in innovation capacity. Success for large service firms is supported by open markets, ICT-related innovations, innovations in work organisation, and skilled human resources. Knowledge intensive service activity (KISA) firms are sources, facilitators and carriers of innovation. Typically, innovation policy for services has been channelled through sectoral approaches. Increasingly, supporting services is becoming a more prominent part of the innovation policy mix. Innovation policy options for services include allowing common innovation tools such as grants and tax credits to include innovation in services, or better integrating service innovation in different commercialisation policies that link public research with industry.

**Promoting innovation in the public sector is another policy tool to consider.** Such approaches require a broader engagement across different ministries and departments beyond those responsible for science and technology. The OECD is developing an Observatory of Public Sector Innovation specifically to help OECD members learn from other examples of public sector innovation. Many of these innovations are for cost savings today, but many are also designed to improve well-being and thus imply future cost savings. While ICT is one area where governments in the OECD have placed considerable emphasis, other initiatives focus on user-driven innovation, an area also increasingly important for marketable products and services.

**The public health care sector is a field where many governments have been seeking to combine innovation in public services and demand-driven innovation.** This is another area of recent policy initiatives across the OECD to use both regulations and public procurement to support the development of solutions to social challenges (environment, aging, health). For example, a recent review of Danish regions noted the regional strategies that prioritised the sector of welfare technologies also used creative policy instruments to overcome the barriers to uptake of these medical advances in the hospital system. A good new product or process may simply not work due to cultural practices of health staff and other considerations beyond the innovation itself.

**The links between innovation and jobs are not always straightforward, but what is clear is that place matters.** Integration in global networks is important. Catalonia has made quantifiable progress in this area, such as in biotech. But the ability to capture knowledge spillovers continues to depend on physical proximity. Catalonia can continue to better build on its knowledge assets, most importantly its people. However, when the research and innovations are not relevant to the local industrial structure, there are missed opportunities and the links with jobs in the short to medium term are more tenuous.