

There are major gaps in our understanding of investments to support innovation and related responsibilities at different levels of government and of the mechanisms for managing this shared innovation policy competence. The OECD is working to develop indicators in this area.

Why do we need indicators ?

Sub-national governments are active investors. On average, the sub-national level accounts for 64% of an OECD country's public investment. However, data are lacking at sub-national level on innovation investments and programmes.

It is important to capture this regional dimension because regions generally play an active role in innovation policy. They engage public and private actors in networks based on regional characteristics and strengths, and they invest in support for these networks. These efforts lead to positive spillovers.

The level of sub-national spending on innovation can be significant. In Germany, just over 50% of public R&D is managed by sub-national governments (2006). Of public R&D and innovation spending by Spain and its regions, approximately 20% of the 10 billion EUR comes from the regional governments (2007).

In some cases there may be up to four levels of government involved in innovation policy. The policy issue is to manage the overlaps and gaps and to ensure synergies in the inevitable competence-sharing arrangements. To understand these interdependencies, it is necessary to know:

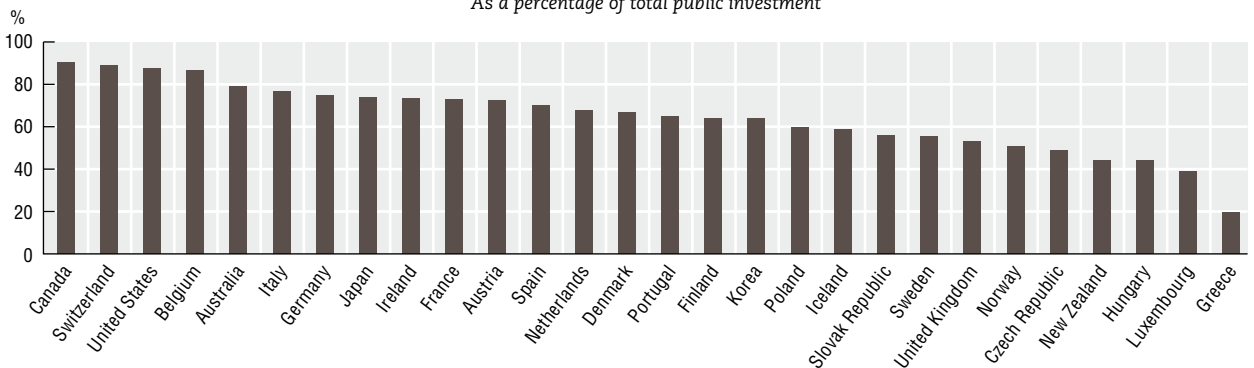
- who does what;
- what the key co-ordination challenges are; and
- how different levels can work together better.

There is also a major gap in understanding regions' innovation policy portfolios. There have been evaluations of individual instruments, but they do not give a sense of the size and orientation of the overall policy portfolio or of its relevance to the region's needs.


It is difficult to identify the incentives that ensure a coherent innovation policy across levels of government. Given a country's responsibility-sharing arrangements, there are several possible co-ordination mechanisms. They include ongoing dialogue, formal consultation processes, agencies for regional development or regional innovation, contracts, and different co-financing arrangements, among others.

Share of sub-national government in public investment, 2007

As a percentage of total public investment



Source: OECD, National Accounts Database, February 2010. See chapter notes.

StatLink  <http://dx.doi.org/10.1787/836078386337>

What are the challenges?

No agreed categorisation of innovation policy instruments

Some definitions, such as that of research and development (R&D), are generally accepted throughout OECD countries. While there exists a commonly accepted definition of innovation at the firm level, there is no agreed definition of innovation policy instruments. Some countries and regions use a broad policy approach, others a narrower one.

Regional roles in innovation

Various parameters make it difficult to codify the role of regions in a given country, let alone across countries. Even when taking into account different institutional structures (federal, centralised), the domestic allocation of competences for innovation is not always clear. Multi-level governance arrangements differ from one policy area to another and may differ from one region to another in the same country.

Multi-level funding of innovation

Funding for science, technology and innovation flows from various sources, such as sectoral ministries and various levels of government. What share of the funds from each funding source is spent in a region? Some national funding is regionalised. Regions may have their own budgets. For many countries there is also a supra-national level, such as the European Union, which has programmes to promote science, technology and innovation.

Indicators at regional level

Developing indicators to depict regional innovation policy portfolios is a task fraught with difficulties: the lack of comparable information at regional level, the huge diversity in approaches and scope of these policies, and the large number of entities to be covered. In the OECD area, there are 335 large sub-national regions. Attempts to quantify policy indicators at regional level are therefore more complex than at national level.

Options for international action**Analyse the new OECD Survey on the Multi-level Governance of Science, Technology and Innovation**

A recent OECD Survey on the Multi-level Governance of Science, Technology and Innovation provides a first step in collecting data. It includes questions on role-sharing at different levels of government in innovation policy and on how governments co-ordinate policy levels. National and regional governments need to co-design and co-deliver these policies effectively. Another pilot study at the OECD is exploring sub-national spending autonomy in policy fields such as education and transport.

A survey can help to:

Develop taxonomy of policy instruments for supporting regional innovation systems

A classification of policy instruments considered part of innovation policy needs to be developed. While there may not yet be agreement on definitions, such a classification will at least make it possible to compare apples to apples across countries and regions.

Develop indicators on regional competences in innovation policy

Such indicators should capture the multi-dimensional role of regions in different aspects of science and technology (S&T) and innovation policy: setting strategy and objectives; policy development; financing; delivery/ implementation; and evaluation. There are currently no clear measures of regional roles in these policy fields, and no assessments of the relation between different areas of regional competences and the effectiveness of policy outcomes.

Developing quantitative indicators on regional support to R&D and innovation

The OECD and the EU are planning to create innovation policy indicators at national and regional level that can capture the intensity and direction of innovation policies beyond R&D support. Such indicators should also be developed to show the orientation of regional innovation policies. Databases on innovation policies for European regions exist at the national level and are being developed for the regional level, but for regions outside the European Union, the information needs to be obtained in a harmonised way through surveys or other sources.

A quantitative indicator on regional innovation policy intensity is also needed. It should capture efforts made at the regional level to promote innovation. As a first step, regional data on GBAORD (Government budget appropriations or outlays for R&D) should be obtained. The main advantage of this indicator is that the data collected is harmonised. Its disadvantage is that it captures only one aspect of innovation policy.

References: OECD (2010), "Sub-Central Governments and the Economic Crisis: Impact and Policy Responses", Economics Department Working Paper No. 752; OECD (2009e), *Regions Matter: Economic Recovery, Innovation and Sustainable Growth*; OECD (2009f), *OECD Regions at a Glance 2009*; OECD (2009g), *Governing Regional Development Policy: The Use of Performance Indicators*; OECD (2007a), *Linking Regions and Central Governments: Contracts for Regional Development*; OECD (2007b), *Competitive Regional Clusters: National Policy Approaches*.