



## Innovation & Entrepreneurship

# Innovation Policy for Competitiveness

The World Bank Group helps developing countries identify, design, and implement policies, reforms and strategic investments to foster innovation in their economies.

## Context

Innovation spurs economic dynamism and structural transformation. Through innovation, new and more efficient businesses drive older, less efficient firms to exit the market or raise productivity levels, improving the overall allocation of resources within the economy. As a key driver of firm growth, innovation fosters shared prosperity by boosting formal employment and wages.

Robust innovation performance is important for building dynamic and resilient economies. Innovation allows firms to specialize, meet international best-practice standards, upgrade quality, and reduce costs. Each of these areas is essential for firms to compete and thrive in the global economy. A wide range of development challenges can also be more easily achieved with the systematic support of research and innovation policies. Agricultural research and extension services, for example, have had a positive impact on agricultural productivity and worker income.

Innovation is closely related to a firm's capacity to adopt, adapt, and develop knowledge. Investments in research and development, innovation, and other types of knowledge capital increase firm capacity to learn and continuously improve product quality and reduce production costs.

Prevailing market, institutional, and systemic failures undermine firm innovation performance in a number of ways:

- Firms tend to underinvest in research and development (R&D), innovation, and other forms of knowledge due to high cost and the uncertainty of returns.

- Different incentives between public research organizations and firms generate failures in terms of knowledge transfer and broader collaboration between science and industry.
- Different framework conditions, such as an open and competitive market place, access to innovation financing, and entrepreneurial capacity, are necessary.
- Innovation is a systemic process which inevitably involves coordination challenges.

Government policies can, in principle, mitigate these problems. Yet, existing policies and programs, developed by and implemented in advanced countries, are only partially applicable in developing economies.

## What we offer

We help countries identify, implement, and evaluate policy reforms, programs, and strategic investments that fit each country's unique circumstances. Our work is structured around four main objectives.

### **Strengthening governance for policy**

**effectiveness.** This includes helping governments to review public spending on science, technology and innovation (STI), design and implement policy programs for innovation, and establish an effective institutional framework for innovation policy. We also support governments in learning from previous programs and in fostering transparency and dialogue in innovation policymaking to reach a policy mix consistent with their development circumstances and trade specialization.

**Enabling firm innovation.** Firm innovation may occur through a number of means, from the adoption of new machinery or organizational practices in existing firms to the startup of research-based companies. We help stimulate innovation and the establishment of innovation-based startup companies by:

- Addressing access to technology, cutting-edge management practices, training, and other non-R&D issues that also foster firm innovation.
- Developing innovation financing mechanisms such as pre-seed and seed funding, including angel and venture investing.
- Supporting mentoring and nurturing services, including venture accelerators.
- Assisting in the design, implementation and evaluation of indirect and direct subsidies to business innovation and R&D investments.

**Improving the impact of public research organizations,** for example by improving frameworks for more effective collaboration between academic institutions and industry and technology transfer. We also help countries address obstacles to higher excellence and productivity in the public research sector through incentive-based reforms and better management of public research organizations.

**Enhancing the contribution of innovation policy for shared prosperity.** Our support focuses on using innovation policy to improve the prospects of the poorest in countries. This can also include using innovation policy to improve outcomes in health or the environment, for example through innovation for green technologies.

## Our work in action

The **India** Technology Centre Systems Project is helping to establish 15 new technology centers and upgrade 18 existing centers housing advanced manufacturing production technologies, training facilities, and business development services. The project is also developing a national IT platform to allow virtual access to those services provided by the centers.

The **Croatia** Second Science & Technology Project assisted in the restructuring of key public research institutes, promoted collaboration between science and industry on technology transfer, encouraged investments by small and medium enterprises in R&D, improved the overall management of the national innovation system. By the end of the project, about \$20 million in SME investments in R&D had been mobilized.

Through the **Colombia** Innovation and Competitiveness Programmatic Project, new modalities of manufacturing extension services are being tested and evaluated in partnership with the government of Colombia. The primary objective is to support small and medium sized firms to enter and upgrade their participation in local and global value chains.

## Relevant publications

[Agricultural R&D Investment, Poverty and Economic Growth in Sub-Saharan Africa: Prospects and Needs to 2050](#)

[Financing Business Innovation: ITE Policy Note](#)

[Public Expenditure Reviews in Science, Technology and Innovation](#)

[Technology Transfer from Public Research Organizations: ITE Policy Note](#)

## For further information

Justin Piers William Hill, Senior Private Sector Development Specialist  
[jhill@worldbank.org](mailto:jhill@worldbank.org)

Ana Cusolito, Economist  
[acusolito@worldbank.org](mailto:acusolito@worldbank.org)