

Innovate or perish: The role of multinationals in local R&D

Innovation is at the heart of competitiveness and multinationals wield significant R&D investment power. A Spanish study sets measure for boosting innovation.



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A number of cutting-edge research projects led by foreign multinationals are based in Spain. There's Hewlett-Packard's global 3-D printing tech center in Catalonia, ThyssenKrupp's cable-less elevator project in Asturias, and Ericsson's research into its network design and optimization in Andalusia, for example.

Companies like these are highly desirable: they provide some 35 percent of private R&D investment in Spain, help create quality jobs and facilitate links to international research, development and innovation (RDI) networks. Governments should create the conditions to attract large corporations, and a new [study](#) by IESE's [Pascual Berrone](#) and María Luisa Blázquez provides pointers on how.

Analyzing three phases of innovation

Produced by [IESE's International Center for Competitiveness](#) and the Fundación I+E (a nonprofit group of multinationals promoting innovation in Spain), the report breaks innovation down into three phases: 1) provisioning resources (inputs), 2) facilitating efficiency, and 3) achieving results (outputs). It then looks in-depth at Spain's strengths and weaknesses in a detailed "360-degree analysis."

Spain plays well to its advantages: It boasts many well-trained scientists and engineers; a high volume of broadband subscriptions; exports of mid-range and state-of-the-art tech products; and substantial sales deriving from product innovation.

However, the authors warn of a clear disadvantage compared to some other western European countries, the United States and Japan: Spain lost its grip on innovation between 2008 and 2015, and its current innovation status doesn't match what would be expected from a nation with its GDP per capita.

The road to innovation

Identifying the R&D shortcomings that put Spain on the same rung as Italy, Portugal and Greece, the authors then outline a series of measures to address them. To turn around, government agencies and the private sector must work together to contribute to an innovation process that works:

- **Increase public R&D investment** to 0.7 percent of GDP, in line with the European average.
- **Provide the regulations, fiscal conditions and infrastructure needed to attract more R&D investment from the private sector.** Ireland is an attractive role model: its tax system has meant that 71 percent of innovation investment comes from foreign multinationals.
- **Guide foreign investment toward the most innovative sectors.** For Spain, the

key industries are motor vehicles, consulting, aircraft construction, shipbuilding, R&D and IT.

- **Improve the caliber of science and math education.** The Japanese model provides interesting lessons. It takes a practical focus and runs its education system as a meritocracy. What's more, future researchers are supported to improve their résumés and the culture reveres teachers.
- **Raise the level of science infrastructure** in line with the Finnish example. The Nordic country has a system for assessing how effective innovation is and rating the institutions working in this field. Finland also boasts an extensive network of government-run research centers.
- **Avoid over-regulation, streamline procedures and safeguard protection of intellectual property.** When compared to the OECD average, it's clear that Spain lags behind and even actively stifles private R&D investment.
- **Foster collaboration in innovation.** Technology hubs need adequate resources and more specialization: research should be geared toward what businesses actually need and involve more foreign researchers and scientific exchange. Switzerland is the leading country here. It plugs 3 percent of its GDP into R&D investment, and, thanks to various federal measures, is a leader in producing patents and generating income.

Methodology, very briefly

Incorporating reports from the World Economic Forum, the World Bank and the European Commission, this study provides a "360-degree analysis" into Spain's strengths and weaknesses in terms of innovation. The study also provides an analysis of the country's most innovative sectors, its top-performing local regions, and looks to role models from abroad.

See also, "[Shutting the doors to foreign trade and investment? At what cost?](#)" for more on the WEF's Global Competitiveness Report 2016-2017, with IESE contributing data for Spain.

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