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Chile

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CHILE

Robust growth in GDP per capita for most of the past two decades has helped Chile to join the ranks of high middle-income countries; its income per capita is now similar to that of Mexico. Economic reform, in particular the adoption of international best practice in macroeconomic management and development of market mechanisms, has underpinned Chile's success in catching up. However, a gap with advanced countries remains, mainly owing to a gap in productivity performance.

Chile's R&D intensity, at 0.67% of GDP in 2004, is less than one-third of the current OECD average of 2.26%. However, it exceeds that of OECD countries such as Greece, Mexico and Poland. At 0.31% of GDP, business spending on R&D is particularly low. This is partly due to Chile's specialisation in non-R&D-intensive industries, but also to the fact that the vast majority of SMEs in all areas do not engage in R&D and innovation. The overall orientation of Chile's R&D partly reflects the still dominant, although declining, role of higher education in the performance of research.

Chile has 3.2 researchers per 1 000 total employment, ahead of most other non-OECD economies except Russia. Although it has invested heavily in education over the past decades, the level of tertiary education attainment, at 13.2% of the population aged 25 to 64 years, is still quite low. About 21% of all university graduates are in science and engineering, close to the OECD average. While progress has been made, the scarcity of human resources for science and technology remains a bottleneck in the Chilean innovation system.

Compared with OECD countries, Chile's level of publications per capita is low (although it has the highest number of publications per capita and the highest publication impact in Latin America). With 0.2 triadic patent families per million population, Chile lags all OECD countries except Mexico. The system's performance reflects both low investment in R&D and the lack of incentives for researchers to publish and for firms to apply for patents. However, innovation in certain resource-intensive sectors has contributed to growth and competitiveness, as shown in the rapid growth in exports of salmon and wine.

A large share of R&D is funded from abroad and a large share of Chilean patents involve foreign co-inventors. Rather than indicating a high degree of internationalisation of R&D, this may be because Chile hosts important international research on astronomy.

To strengthen the role of innovation in Chile's economic growth, the *OECD Review of Innovation Policy: Chile* (2007) recommended that Chile build consensus on the importance of innovation for future growth. A key challenge is the development of human resources and raising educational standards to international levels. In addition, building on existing strengths and comparative advantages to enhance nascent clusters of innovative activities is vital for moving towards more innovation-driven growth.

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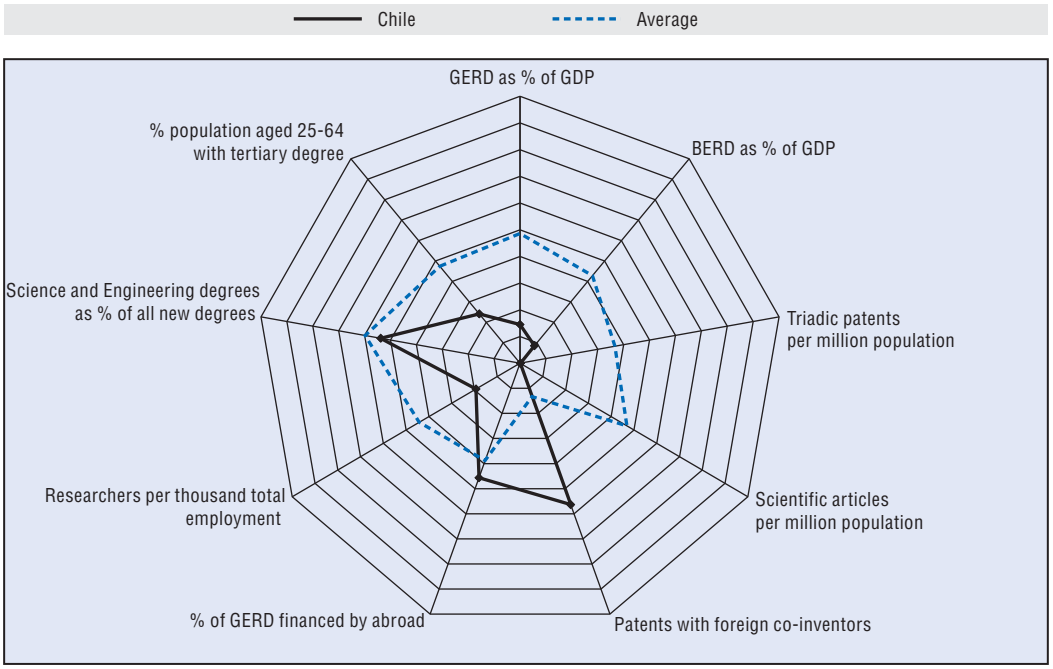
Science and innovation profile of Chile



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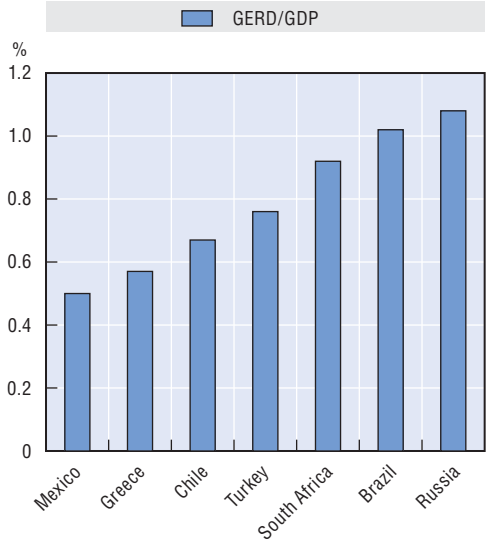
R&D intensity, 2006

Gross domestic expenditure as a percentage of GDP



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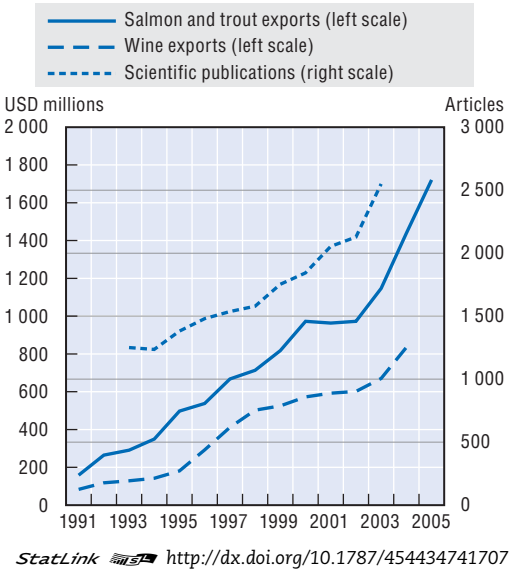
Outcomes of Chilean R&D



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Chapter 3

Science and Innovation: Country Notes

This chapter complements Chapters 1 and 2 by providing an individual profile of the science and innovation performance of each OECD country, as well as observers to the OECD Committee on Science and Technology Policy (Brazil, Chile, China, Israel, Russia and South Africa), in relation to their national context and current policy issues. The graphs enable countries to see some of their relative strengths and weaknesses as compared to other countries' performance.

The common indicators in the first (radar) graphs were selected on the basis of current policy issues. They focus on research and innovation inputs, scientific and innovation outputs, linkages and networks, including international linkages, and human resources. A standard set of indicators is used; however, when data are not available, alternative indicators may be applied. The annex provides a full list and description of the indicators, methodological notes and data sources.

For each indicator in the radar graph, the country with the maximum value is set at 100, taking into account all OECD and non-OECD countries with available data. The average is calculated by taking into account all OECD countries with available data (non-OECD countries are excluded from the average). The annex provides further details.

The radar graphs are accompanied by country-specific figures that further illustrate national characteristics and underpin policy-specific comments. The selection of comparator countries in these graphs aims to highlight the general position of the focal country and, in some instances, data on other countries may also be shown.

Table of Contents

Boxes

Tables

Figures