

4. Country Report of Chile^{1, 2, 3, 4, 5}

4.1 Current Status of the ICT Sector of Chile

Chile has a population close to 18 million, 89 percent urban, population growth rate less than one percent and life expectancy is 80 years. Chile is today one of South America's most stable and prosperous nations, with a high-income economy and high living standards. It leads Latin American nations in rankings of human development, competitiveness, income per capita, globalization, and state of peace, economic freedom and low perception of corruption. It also ranks high regionally in sustainability of the state and democratic development. Chile is the only South American member of the Organization for Economic Cooperation and Development OECD (2010).

Currently in Chile, only around 0.6 % of the Gross Domestic Product GDP is invested in Science and Technology research, which is small in comparison to developed countries in which this number rises to about 2 - 3%. One of the main reasons for these low numbers is the little participation of private funds in science and technology R & D funding.

Currently, the Information and Communications Technology, ICT, industry in Chile represents 1.4% of the GDP. Although a somewhat low number, it must take into account that it is greatly influenced by the fact that very few physical ICT goods are produced in Chile. Another important factor in this number is the low participation of the state, given that, even though the state represents about 22% of the GDP, it consumes only a 6% of the ICT market.

State's funds may be invested in science and technology through three Institutions: CONICYT (www.conicyt.cl); CORFO (www.corfo.cl) and MIDEPLAN (www.mideplan.cl).

CONICYT was created in 1967 as an advisor entity for the government in science and technology matters. Its main responsibilities include defining science and technology policies, promoting and funding research, supporting the formation of human resources, supporting international cooperation on research, etc. Although, in the last decade, its contribution to financing research has grown in about seven times, Chile still needs a better mechanism, to draw more private funds

¹ This report was written by Ansonia Lillo Tor, President, University Santo Tomás, Campus Arica, Chile.

² https://www.indexmundi.com/chile/demographics_profile.html

³⁸ <https://www2.deloitte.com/content/dam/Deloitte/au/Documents/public-sector/deloitte-au-ps-social-progress-index-executive-summary-2015-90415.pdf>

⁴ <https://web.archive.org/web/20090212140250/http://hdrstats.undp.org/indicators/25.html>

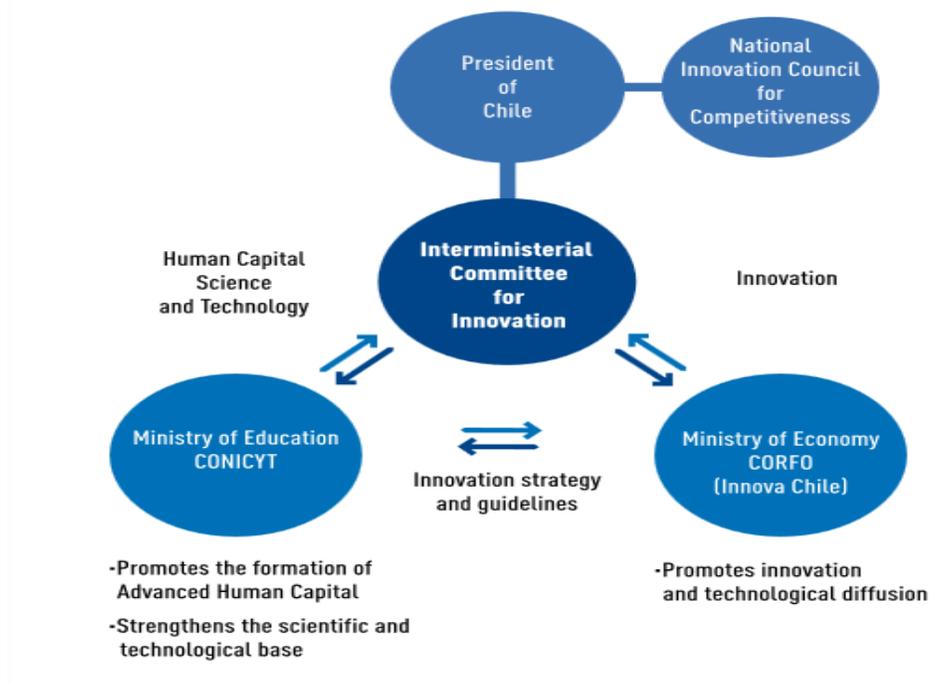
⁵ <http://sccc.cl/wp-content/uploads/2013/04/Information-and-Communication-Technology-in-Chile.pdf>

into research activities and reach a funding scheme similar to that of developed countries, in which most of the spending is done by private enterprises.

Highlights from the OECD Science, Technology and Industry Scoreboard 2017 - the Digital Transformation: Chile Science, Innovation and the Digital Revolution^{6,7}

- Chile was amongst the OECD countries with the most rapid adoption of mobile broadband subscriptions per inhabitant between 2010 and 2016.
- 75% of urban households in Chile have a broadband connection and, while rural coverage is lower at 56%, it increased by 20% between 2012 and 2015, nevertheless Chile has one of the greatest urban-rural divide in broadband access.
- The proportion of people in Chile using the internet almost doubled between 2009 and 2017, reaching 78% amongst those age 16-74; the digital divide between old and young is high: almost all aged 16-24 (98%) use the internet, but only 41% of 55-74 year olds do so (OECD average 63%).

Figure 1. The National Innovation System in Chile



⁶ <http://www.oecd.org/chile/sti-scoreboard-2017-chile.pdf>

⁷ <http://www.oecd.org/sti/scoreboard.htm>

- From 2010 a 2016, Chile experienced net employment gains of almost 1 million jobs, a 14% increase; all sections of the economy contributed to employment growth.
- Domestic manufacturing activities in 2014 were a major source of value added in total exports (about 30%) for Chile, similar to China, Germany, Japan and Korea.
- Chile's tertiary education spending accounted for 2% of GDP in 2015, the fourth highest proportion among OECD countries; vocational education spending of 0.3% of GDP is, however, lower than the OECD average (0.5%).
- The median job in Chile had relatively low ICT task intensive in 2015, less than the intensity of an average job in Norway.
- Experimental indicators on the international mobility of scientific authors, based on bibliometric data, show that Chile has become increasingly attractive to international scientific authors, resulting in a net inflow of around 1330 authors between 2002 and 2016.
- In Chile around one of every thousand persons in employment is a researcher, up from 2005 (0.9) but below the OECD average of eight researchers per thousand workers. Gross Domestic expenditure on R&D is the lowest in OECD, at 0.38 of GDP (OECD average 2.4%).

In the world, the ICT sector is rapidly growing, creating around 120,000 jobs every year, yet due to differences in demands and skills, and despite soaring unemployment, there may be a lack of 900,000 skilled ICT workers in 2020. Women constitute just 30% of the around seven million people working in the ICT sector and female graduates of computing or related degrees are alarmingly low.

In order to reverse this trend and in turn boost the economy through allowing full participation in society, there must be a joint effort to encourage young people, and especially women, to take up ICT related career paths. Entrepreneurship, research and innovations, they can be done through education.