### **Executive summary**

Chile is a relatively stable and open economy. Sound macroeconomic management, coupled with effective penetration in global markets (trade equals 60% of GDP, a figure that is 20 percentage points higher than in Australia and 40 percentage points higher than in Argentina) and Chinese appetite for raw materials, enabled the country to enjoy sustained and relatively stable growth since the early 1990s. This reality also insulated Chile from the more volatile growth patterns of other economies in Latin America (Chile has been growing on average 4% since 2000 whereas Latin America at 2.8%). As a consequence, Chileans today are better off than in the past. They have higher incomes. They are progressively closing the gap with more advanced countries: the per-capita income of Chile was only 26% of the one in the United States in the 1990s, while nowadays the average income of a Chilean equals 40% of the one of a US citizen. And they have access to better services and improved infrastructure; 16 out of 100 Chileans have a fixed broadband connection; a figure that doubles the one of ten years ago and that is well above the current average of 10 out of 100 in Latin America.

Low productivity holds back Chile's growth. Most workers in Chile are employed in low productivity activities that contribute little to value addition. Total factor productivity (TFP) has remained stagnant since the beginning of the 1990s, mostly because of the dynamics in the mining industry (TFP in mining has been declining at an yearly average of 4.7% between 1993 and 2015). The deterioration in copper ore grades has demanded a shift to underground mining and an increase in energy intensity resulting in lower productivity. In addition, the number of workers per unit of output in mining is three times higher in Chile than in Sweden. Improving skills will be important to increase productivity. According to PISA estimates, the proficiency in literacy, mathematics and science of 15-year-olds in Chile is among the lowest in OECD countries; 28% of students lack the elementary skills required to read and understand simple texts or to master basic mathematical and scientific concepts and procedures. Graduate, post-graduate and vocational training are poorly connected to the needs of the private sector. Continuous updating of vocational programmes, as well as of university curricula, will be essential to close the gap between supply and demand in the labour market.

The limited diversification of the economy, both in terms of activities and markets, leaves Chile vulnerable to external shocks. Domestic economic growth still highly relies on natural resources. Mining accounts for more than half of Chilean exports. Three countries - China, the United States and Japan - are the recipients of more than half of total exports. A contraction in demand by any of these countries can therefore affect the entire economy. Fluctuations in cooper prices also have major effects, despite the effort to maintain macroeconomic stability through the stabilisation fund. Such swings affect business and citizen perceptions, limiting pro-innovation, risky and long-term investments. Indeed, the boom in copper prices in the mid-2000s significantly increased the profitability of mining, sustaining economic growth but limiting the incentives to invest in other activities. Chile accounts for over one-third of the world's total copper reserves, and is among the top three producers of lithium. Mining will therefore continue to be a key driver of growth in the future; however, the sector faces limits in terms of labour absorption given the characteristics of the production process and the move towards automated mining. Diversifying the economy by generating business opportunities for suppliers in related economic activities, and by enabling business development in new areas, is critically important to sustaining growth and creating jobs. In summary, achieving successful diversification in Chile does not mean dismissing mining but rather transforming it, making it more productive, and exploiting its synergies with emerging industries and technologies, including digital technologies and solar energy. Furthermore, Chile has the potential to benefit more from its openness and improve its participation in global value chains (GVCs) by seeking opportunities beyond mining, including in services. In 2014, the services value-added content of Chile's total exports was 38.4%, below the OECD average of 55.5%.

A high concentration of economic opportunities in few activities, firms and regions hampers future progress and limits innovation. Large firms play a dominant role in the economy, but they innovate less than their peers in advanced countries. In Chile, large firms explain 73% of the domestic business turnover and 57% of total business research and development (R&D) expenditures, while in Germany such firms account for 53% and for 85% of total business R&D expenditures. Chile has one of the lowest R&D intensity of all OECD countries (0.39% of GDP), and its private sector's contribution – only 33% of total R&D expenditure – is significantly below the OECD average of around 68%. The difference between the top and the bottom regions in per-capita income is the second highest of all OECD countries, after Mexico. Foreign direct investment is concentrated in Santiago, Antofagasta and Atacama, and 80% of start-ups are created in the capital region. In Colombia, by comparison, the capital region accounts for less than half of total national start-ups.

The Chilean model requires an "update" to continue succeeding. Society's aspirations change with progress, and the Chilean society – with its growing middle class – is no exception. Chileans are demanding more opportunities for their youth and access to new services. The traditional, highly concentrated export-led model will struggle to deliver these opportunities. Matching the aspirations of an inclusive society requires therefore adjusting the model and finding new sources of growth to broaden society's participation in the economy and achieve shared prosperity.

The global march towards inclusive and sustainable development, captured in the Sustainable Development Goals and coupled with ongoing major technological changes, opens up new opportunities for Chile. The call for "green" products and services could transform the Chilean economy, offering opportunities for domestic entrepreneurs and research centres to generate new businesses along the whole value chain. This holds true in traditional activities such as mining and agro-food and in new areas including solar energy and big data. Most countries in the world, including Germany, Sweden and Italy, are growing in their awareness of the potential disruptive impacts of ongoing technological change and, in fact, are taking steps to shape their futures by defining long-term visions, scanning potential options and investing for the long term.

Chile, in line with international practices, has embarked upon reforming institutions to increase impact and deliver more effective results. It created, for example, the National Productivity Commission to better prioritise policy actions and Invest Chile to attract foreign direct investments in strategic areas. The government, through CORFO, also led an effort to enable public-private partnerships to identify future road-maps and enable change in key industrial ecosystems. And this Production Transformation Policy Review (PTPR) of Chile, based on peer learning, identifies three game changers for future reforms: 1) updating institutions and governance to cope with the broader and more sophisticated roles that the government is called on to play now and in the future; 2) strengthening and institutionalising the anticipation capacity and the foresight process at the highest strategic level to increase long-term planning capabilities, and 3) shifting to a place-based approach to policy making. The PTPR provides an in-depth analysis of the strategic programmes that Chile has put in place to benefit from new technologies and global trends, focusing on solar energy, green mining and functional agro-food.

A new pact between the government, business community, academia and society is needed to allow Chile to embark on its path to prosperity. Being a stable and open

economy will not be enough to sustain business development or respond to society's demands. The world is moving fast, and for Chile to be part of the global wave of change, a renewed approach to policy making and to the government-business-society relationship is needed. Going beyond ideological divides and finding common ground to mobilise private and public actors is of critical importance for Chile to avoid marginalisation in the changing global context. It will help identify national development challenges – such as greening the economy – that can align interests and enable change in the economy and society alike.



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