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Foreword

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries. The economic situation and policies of Chile were reviewed by the Committee on 12 September 2022. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 16 September 2022.

The Secretariat's draft report was prepared for the Committee by Jens Arnold and Paula Garda under the supervision of Aida Caldera Sánchez. Statistical research assistance was provided by Anne Legendre, and editorial assistance by Karimatou Diallo and communication assistance by Nathalie Bienvenu.

The previous Survey of Chile was issued in 2021. Information about the latest as well as previous Surveys and more information about how Surveys are prepared is available at https://www.oecd.org/eco/surveys/.

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Basic statistics of Chile, 2021[1]

Numbers in parentheses refer to the OECD average[2]

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	19.2		Population density per km²	25.8	(38.7)
Under 15 (%,)	19.0	(17.6)	Life expectancy at birth (years, 2020)	80.3	(79.7)
Over 65 (%)	12.7	(17.7)	Men (2020)	78.0	(77.0)
International migrant stock (% of population, 2019)	5.0	(13.2)	Women (2020)	82.5	(82.5)
Latest 5-year average growth (%)	1.2	(0.5)	Latest general election	December-2021	
ECONOMY					
Gross domestic product (GDP)			Value added shares (%,)		
In current prices (billion USD)	317.4		Agriculture, forestry and fishing	3.7	(2.6)
In current prices (billion CLP)	240 420		Industry including construction	35.4	(27.7)
Latest 5-year average real growth (%)	2.2	(1.5)	Services	60.9	(69.7)
Per capita (thousand USD PPP)	29.1	(50.7)			
GENERAL GOVERNMENT Per cent of GDP					
Expenditure (OECD: 2020)	33.4	(48.5)	Gross financial debt (OECD: 2020)	41.5	(133.5)
Revenue (OECD: 2020)	25.9	(38.1)	Net financial debt (OECD: 2020)	11.6	(81.3)
EXTERNAL ACCOUNTS					
Exchange rate (CLP per USD)	757.36		Main exports (% of total merchandise exports, 2020)		
PPP exchange rate (USA = 1)	430.35		Crude materials, inedible, except fuels	39.1	
In per cent of GDP			Manufactured goods	26.6	
Exports of goods and services	31.9	(54.5)	Food and live animals	20.8	
Imports of goods and services	32.6	(51.1)	Main imports (% of total merchandise imports, 2020)		
Current account balance	-6.5	(0.1)	Machinery and transport equipment	36.6	
Net international investment position (2020)	-9.9		Chemicals and related products, n.e.s.	13.3	
			Mineral fuels, lubricants and related materials	12.4	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate (aged 15 and over, %)	52.1	(56.2)	Unemployment rate, Labour Force Survey (aged 15 and over, %)	8.9	(6.1)
Men	62.6	(64.1)	Youth (aged 15-24, %)	20.0	(12.8)
Women	42.1	(48.7)	Long-term unemployed (1 year and over, %)	2.4	(2.0)
Participation rate (aged 15 and over, %)	57.2	(60.3)	Tertiary educational attainment (aged 25-64, %, 2017, OECD: 2020)	25.2	(39.0)
ENVIRONMENT					
Total primary energy supply per capita (toe)	2.0	(3.8)	CO_2 emissions from fuel combustion per capita (tonnes, 2019)	5.0	(8.3)
Renewables (%)	24.6	(11.6)	Renewable internal freshwater resources per capita (1 000 m?, 2018)	47.3	
Exposure to air pollution (more than 10 µg/m³ of PM 2.5, % of population, 2019)	98.6	(61.7)	Municipal waste per capita (tonnes, 2018, OECD: 2020)	0.4	(0.5)
SOCIETY					
Income inequality (Gini coefficient, 2017, OECD: latest available)	0.460	(0.316)	Education outcomes (PISA score, 2018)		
Relative poverty rate (%, 2017, OECD: 2018)	16.5	(11.8)	Reading	452	(486)
Median disposable household income (thousand USD PPP, 2017, OECD: 2018)	10.1	(25.5)	Mathematics	417	(488)
Public and private spending (% of GDP)			Science	444	(487)
Health care (OECD: 2020)	9.1	(9.7)	Share of women in parliament (%)	35.5	(32.4)
Pensions (2019, OECD: 2017)	4.5	(8.6)			
Education (% of GNI, 2020)	5.3	(4.6)			

[1] The year is indicated in parenthesis if it deviates from the year in the main title of this table.
[2] Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 80% of member countries.
Source: Calculations based on data extracted from databases of the following organisations: OECD, International Energy Agency, International Labour Organisation, International Monetary Fund, United Nations, World Bank.

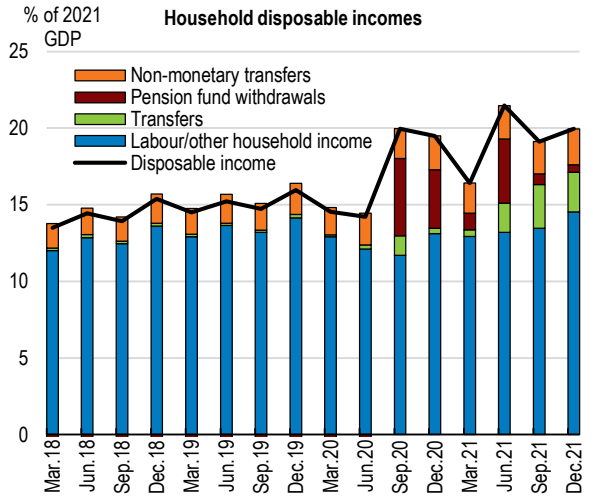
Executive summary

After a strong recovery, growth has slowed down markedly

Chile's solid institutions have successfully delivered macroeconomic stability. This has helped to weather three major shocks. In 2019, widespread social unrest revealed deep-rooted discontent with economic and social inequalities. In 2020, the Covid-19 pandemic took a steep toll on lives and livelihoods, and led to the sharpest contraction of economic incomes in 40 years. In 2022, the Russian aggression on Ukraine and global supply shortages exacerbated already strong inflationary pressures, with rising prices pounding hard on many families. High prices of oil imports have worsened external accounts.

On the back of exceptionally strong policy support, the economy recovered swiftly from the pandemic and has significantly overheated. The fiscal expansion reached its peak in 2021 when the economy had already recovered. In addition, three rounds of early withdrawals from individual pension accounts released liquidity worth around 18% of GDP to households. This resulted in overall support of 30% of GDP, which far overcompensated the loss of labour incomes caused by the pandemic (Figure 1). A resulting unsustainable consumption boom took an end in 2022, while fiscal policy consolidated sharply.

Figure 1. Policy support overcompensated income losses

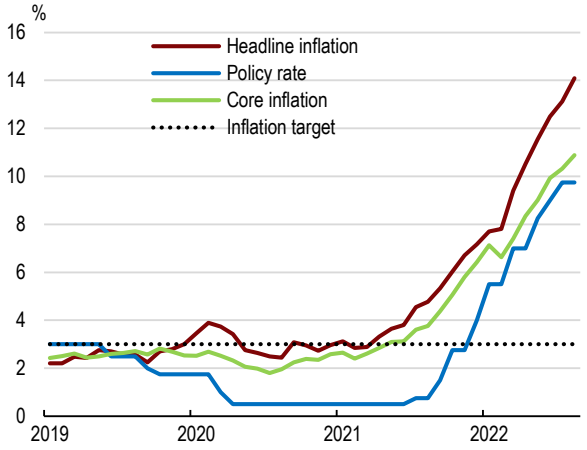


Source: OECD calculations based on Central Bank of Chile.

StatLink https://stat.link/2mv54l

Inflation has risen to a 30-year high, fuelled by expansionary fiscal policy in 2021 and exacerbated by global supply constraints and the Russian aggression on Ukraine. This triggered a strong and timely monetary policy response (Figure 2). Inflation expectations, which had been solidly anchored for decades, rose significantly above the target. The pandemic policy response is leaving a strong mark on Chile's traditionally deep financial markets. Pension fund withdrawals required funds to liquidate long-term assets in their portfolio and reduced financial market depth, at the same time as many households depleted their pension savings.

Figure 2. Inflation has risen



Source: Central Bank of Chile.

StatLink https://stat.link/62q1hv

Looking ahead, growth is projected to slow sharply (Table 1). In the near future, quarterly GDP contractions are likely to continue until the last quarter of 2022, as high inflation and rising interest rates curtail household purchasing power. Pre-pandemic employment levels will be recovered gradually, supported by ongoing hiring subsidies. Inflation will only return to the target in early 2024.

Significant underlying growth challenges will have to be addressed over the next years. Rapid population ageing will reduce Chile's labour force, and with that the economy's growth potential, despite a positive impulse from immigration. Productivity has been stagnant or even decreasing, and structural reform efforts have fallen short of what is needed to lift it. Without policies that boost productivity, the scope for further economic and social progress will be severely limited.

Table 1. Growth is projected to slow down

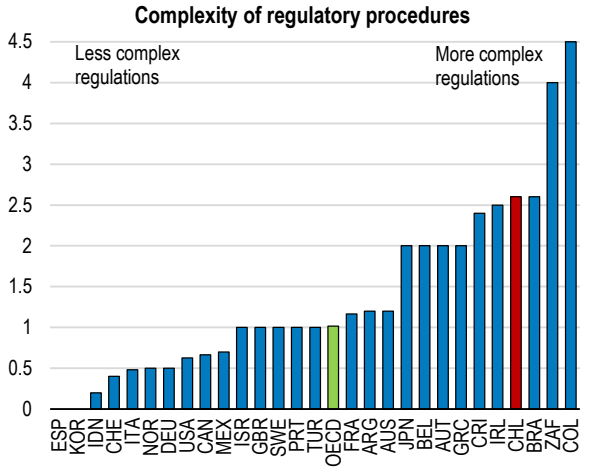
	2021	2022	2023
Gross domestic product	11.9	1.9	-0.5
Private consumption	20.5	2.1	-1.9
Gross fixed capital formation	18.0	-2.4	-1.8
Exports	-1.5	1.6	2.1
Imports	31.2	5.2	-1.4
Unemployment rate	8.8	7.8	8.0
Consumer price index	4.5	11.1	6.4
Headline fiscal balance (% of GDP)	-7.7	-0.1	-2.6
Public debt (gross, % of GDP)	36.3	38.2	40.9

Source: OECD Economic Outlook database.

Low competitive pressures in a number of sectors are one reason behind weak productivity. Lengthy and complex regulations and licensing procedures hamper entrepreneurship and competition (Figure 3). A comprehensive review of existing regulations and a wider recourse to "zero-licensing" schemes would facilitate entry and strengthen competition. Better funding for the competition authority could support its competition advocacy role, including through more market studies that take stock of competition bottlenecks.

Foreign competition is also hampered by regulatory barriers. These barriers affect specific areas such as cabotage transport and public procurement, but there is also scope for improving trade facilitation and simplifying border procedures. Exports remain dominated by natural resources.

Figure 3. Regulations are complex



Source: OECD Product Market Regulation database 2018.

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Overall spending on research and development and innovation is relatively low. Public support for innovation and technology upgrading is being strengthened to boost productivity. Looking ahead, innovation support could be better coordinated and aligned with strategic priorities such as sustainability. Regular impact evaluations would help to focus R&D spending on the most effective policy instruments.

Better social protection and more equal opportunities are key priorities

Covid-19 has reversed previous declines in poverty and inequality. Around one third of the population is economically vulnerable, meaning that they remain at risk of poverty, with few financial buffers to cushion themselves against adverse events. Income inequality remains high by OECD standards, while labour informality affects more than a quarter of the population.

The pandemic has highlighted significant gaps in social protection. There is a need for developing a better social protection system that does not differentiate between formal and informal workers. Ensuring some basic social protection coverage for all, including in pensions, health and unemployment insurance, while simultaneously reducing the cost of formal employment, would reduce labour informality.

Few people have adequate old-age pensions, owing to low contributions and contribution gaps due to informal employment. A recently established universal basic pension will significantly improve the level of pension benefits for many low-income earners. Income-support programmes are highly fragmented, and unifying social assistance programmes into a single cash benefit scheme will allow increasing coverage and benefits.

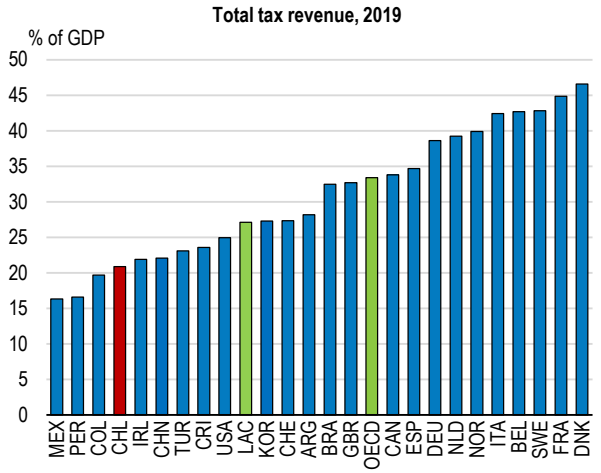
Social contributions may affect incentives for formal job creation, especially among low-income workers. Future pension reforms should pay particular attention to formalisation incentives, while raising pension replacement rates.

Education is key for reducing inequalities and raising productivity at the same time. Learning outcomes remain well below the OECD average and pandemic-related school closures have

exacerbated these longstanding challenges, as fewer students from vulnerable backgrounds used digital tools to remain connected. Expanding access to quality early childhood education would bridge early and often decisive gaps in cognitive and social progress and allow more women to work. Working conditions for teachers fall short of OECD average standards, with lower pay and longer working hours.

Tax revenues of only 21% of GDP are insufficient to meet rising social demands while preserving necessary public investment in infrastructure, education and health (Figure 4). Personal income taxes, which only 20% of Chileans pay, are one explanation behind this low tax collection. Raising public revenues by 4 percentage points of GDP, as currently planned by the authorities, is ambitious but within reach through a comprehensive tax reform.

Figure 4. Tax revenues are low



Note: LAC is a simple average of ARG,BRA,CHL,COL,CRI,MEX, PER. Source: OECD, Global tax revenue database.

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Fostering sustainable growth

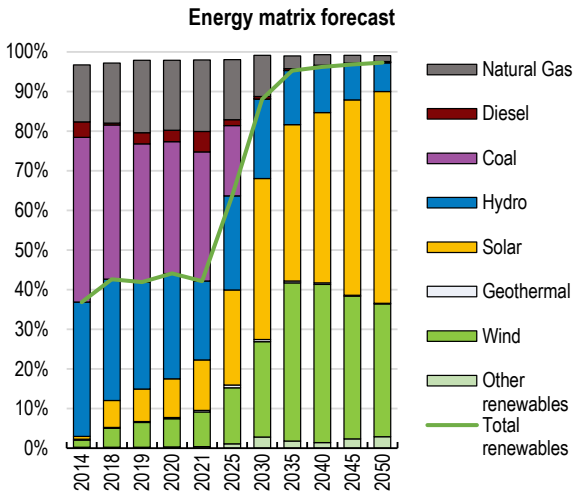
A legally-binding long-term strategy for climate mitigation and adaptation aims at carbon neutrality by 2050 and is expected to generate emission reductions before 2025, giving rise to a declining trend only slightly above the 1.5-degree-compatible pathway range.

Renewable sources currently account for 47% of electricity generation, after a steady decline of the role of fossil fuels as solar and wind energy have gained importance. This development is set to accelerate over the next decades (Figure 5), to exploit a unique potential in the generation of electricity from renewable energy sources, estimated at over 70 times of current electricity supply. This makes Chile well-placed to produce and export green hydrogen, which is the only technology known so far that can decarbonise some hard-to-abate processes in heavy industry.

Despite this potential in renewables, coal combustion remains a major source of electricity today. Plans to phase it out by 2030 are ambitious but necessary and will reduce energy-related emissions. Transport-related emissions are set to decline through the electrification of the vehicle fleet, with new vehicle sales restricted to zero-emission models as of 2035.

Carbon prices remain distant from international best practice. The current level of the carbon tax is too low to promote renewable energy sources and the low carbon price hampers the development of an emission-trading scheme. Potential effects of higher carbon prices on low-income households could be mitigated through targeted cash transfers, building on recent success in this area.

Figure 5. Renewable energies have potential



Source: International Energy Agency, Ministerio de Hacienda.

StatLink https://stat.link/7rzep1

Main findings and key recommendations

MAIN FINDINGS	KEY RECOMMENDATIONS
Refining macroeconomic policies and reforming taxation	
Inflation has risen to above 14 percent and inflation expectations over a 2-year horizon now exceed the inflation target, despite timely monetary tightening.	Maintain a restrictive monetary policy stance to ensure the return of inflation to target.
Public debt has risen, the economy has recovered strongly from the pandemic-related downturn and inflation has risen significantly above target.	Keep the pace of fiscal consolidation in line with current fiscal plans, including a strong reduction of public expenditure during 2022.
The current tax intake of 21% of GDP is insufficient for achieving sizeable improvements in social protection and public services such as health and education, and for achieving more inclusive and sustainable growth in the future.	Mobilise additional tax revenue through a comprehensive reform of personal income taxes, property taxes and improvements in tax administration.
The fiscal rule has failed to prevent a rise in public debt and lacks a formal escape clause, leaving details about departures from the rule undefined.	Enhance the fiscal rule with a debt anchor and an escape clause that defines conditions for departing from it, and a trajectory to return afterwards.
Traditionally deep financial markets have been affected by extraordinary pension fund withdrawals, resulting in shorter maturities and higher rates.	Ensure that part of future pension contributions are saved and invested in the capital market.
Strengthening productivity and competition	
Lengthy and tedious municipal licensing procedures continue to hamper entrepreneurship and competition. Research and development spending is low.	Streamline and unify municipal licensing procedures and foster the digitalisation of relevant procedures.
Many regulations may have become obsolete and digitalisation provides plenty of opportunities to reduce compliance costs.	Review the stock of existing regulations and their impact on competition. Move towards "zero-licensing" schemes wherever possible.
The competition authority has been undertaking market studies of key sectors, which revealed significant need for action.	Ensure an adequate budget for the Competition Authority, in particular for the funding of market studies.
Support for research and development is fragmented into several programmes which lack systematic and regular evaluations.	Enhance R&D support focusing on the most effective programmes, maintaining a balanced mix between direct support and tax credits.
Strengthening social protection and job quality	
Informal employment affects 25% of workers. This precludes them from access to many social security benefits, while reducing productivity and tax revenues.	Establish a comprehensive strategy to foster formalization, including lower non-wage labour costs, better skills, stronger enforcement and improvements in tax administration.
The pandemic has highlighted significant gaps in social protection, particularly for informal workers. Income-support programmes are highly fragmented.	Consider merging existing cash transfer programmes into a single conditional guaranteed minimum income scheme.
Low-income pensions have improved due to a novel guaranteed minimum pension, but many middle income earners and women have inadequate old-age pension levels. Higher mandatory contributions raise the cost of formal job creation, driving many low-skilled workers into informality.	Consider raising pension levels and applying a progressive contribution rate schedule, ensuring strong incentives for formal job creation.
The public health system covering the disadvantaged population is underfunded, while private insurers select the lowest risk individuals Formal workers pay contributions for public healthcare, while informal workers don't have incentives to contribute as they get almost the same benefit package for free.	Improve universal access to quality healthcare services by pooling existing resources and distributing them more equally across insurance schemes, with stronger recourse to general taxation revenues.
Improving opportunities and outcomes in education	
Early childhood education is key for improving learning outcomes later in school, but funding is highly unequal across institutions. Female labour market participation is low, partly due to a lack of care facilities.	Expand access to early childhood education to all children from age three. Expand the central government funding of pre-school educational institutions that are not managed by the central government.
The training system is only weakly aligned with labour market needs and vulnerable workers find it difficult to access training courses.	Embark on a full revision of training programmes, including the tax credit, to increase the relevance and quality of training and improve targeting towards vulnerable workers.
Strengthening economic governance and the fight against corruption	
Tender calls are meant to be the standard form of public procurement, but there are no clear rules when direct contracting can be used instead.	Clarify the rules for using tender calls in public procurement and strengthen compliance with these rules.
Chile has comprehensive regulations in the areas of lobbying, conflict of interest, financing of political parties and campaigns, but not all relevant information is publicly available.	Ensure that all members of government, congress and highest bodies of the judiciary submit their interest declarations without exceptions.
Making growth more sustainable and greener	
Total emissions increased significantly between 1990 and 2018. Existing regulations are not always aligned with environmental objectives. The carbon tax is too low to promote renewable energy sources, which hampers the development of an emission-trading scheme.	Accelerate progress in decarbonising the economy through more stringent regulations and more consistent price signals, using both carbon taxes and cap and trade systems, while protecting the purchasing power of vulnerable households.
Chile has a strong potential for renewable energy generation. Power plants using renewable energy sources currently pay the same carbon tax per output as those generating carbon emissions.	Consider accelerated exemptions for power plants using renewable energy sources from the carbon tax.

1 Key policy insights

Chile's economy recovered swiftly from the pandemic on the back of exceptionally strong policy support, which eventually led to a significant overheating of the economy. Inflation has risen amid buoyant private consumption, further aggravated by the Russian aggression on Ukraine. Monetary authorities have acted in a timely and decisive fashion to contain inflation, and fiscal policy is now consolidating. In the medium term, Chile's fiscal rule could be further enhanced through a debt anchor and a well-defined escape clause. Significant underlying challenges will have to be addressed over the next years, including stagnant productivity and high inequalities. Strengthening competition, reducing regulatory barriers and spending more on research and innovation will be key priorities for boosting productivity and investment, while pressing social needs call for more attention to how incomes and opportunities are distributed, including through taxes and transfers. Expanding access to high-quality early childhood education would improve educational outcomes and productivity, while allowing more women to work. Environmental challenges and risks loom large, but also provide significant opportunities for the future. The current high fossil content of the energy matrix contrasts with Chile's strong potential in renewable energy generation.

Maintaining growth and enhancing social inclusion will require bold reforms

Chile's economy has been a poster-child of Latin America for a long time. Its solid institutions have delivered macroeconomic stability and rising living standards. A strong reputation for sustainable and prudent fiscal policy and an independent central bank have laid the grounds for this stability. Per-capita incomes have more than doubled since the 1990s and are among the highest in the region. Poverty has fallen while a new middle class has emerged. Most social indicators have seen significant improvements.

However, despite all this remarkable progress, cracks have emerged on the surface. In October 2019, widespread social unrest paralysed the country and revealed deep-rooted discontent with inequalities of economic conditions and opportunities. Stark differences in access to education and health services have precluded many Chileans from benefiting from the country's economic progress, jeopardising social cohesion and causing disappointment. Around one third of the population is economically vulnerable with incomes below USD 13 per day at 2011 purchasing powers (World Bank, 2021[1]) and spend more than 30% of their income on servicing debt (CMF, 2021[2]).

After the social unrest, the economy was battered by two additional major shocks. The Covid-19 pandemic took a steep toll on lives and livelihoods, and led to the sharpest contraction of economic incomes in 40 years. On the back of exceptionally strong policy support, the economy recovered swiftly in 2021 and overheated significantly, with domestic demand pushing inflation well above target. Inflationary pressures were exacerbated by the Russian aggression on Ukraine and global supply shortages in 2022, with rising food and energy prices pounding hard on many families as inflation has risen above 14%. In addition, China is Chile's major trading partner and its zero-Covid policy has reduced demand for Chilean exports.

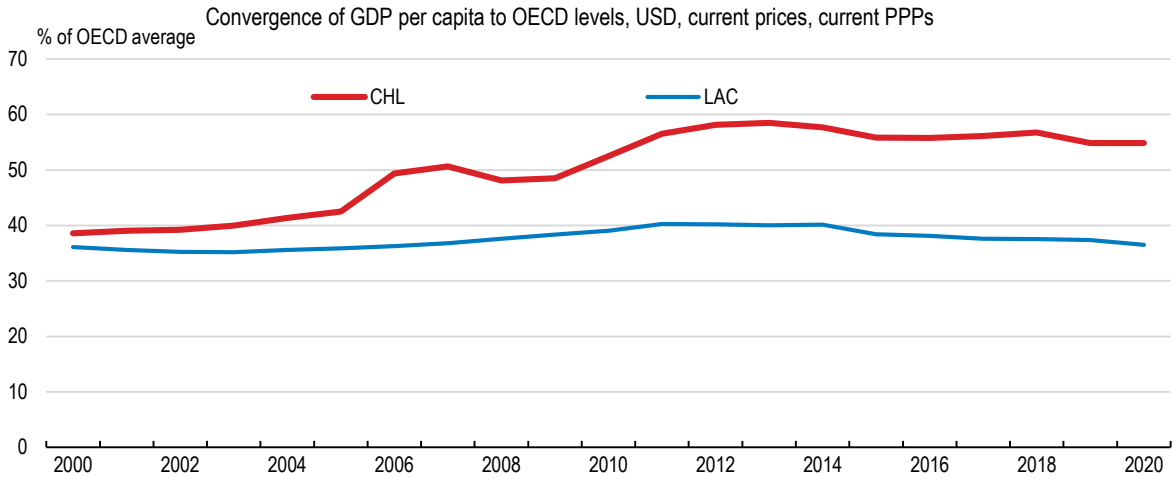
But in the face of these extraordinary shocks, Chile's institutions have been able to react with resilience and prudence, correcting the course in time and averting worse outcomes. For all their convulsion, the social unrest of 2019 eventually resulted in an orderly and democratic process of rewriting the country's constitution. In a national referendum, a majority of Chileans voted in favour of preparing a new constitution. A concrete proposal for a new constitution was rejected in another national referendum in September, and another process for drafting a new constitution is now underway.

Chile's pandemic response successfully used the fiscal space accumulated over years to lift the economy out of the recession, supported by a rapid and well-organised vaccination rollout. Rising inflation was addressed with timely action by monetary authorities and targeted fiscal support, while high global energy prices are being harnessed to advance ambitious plans to exploit Chile's comparative advantage in renewable energy generation. A new government took office in March 2022, elected on a campaign centred on social reforms, more equity, including across genders, and more sustainability. Significant reform progress has either been achieved over this short period or is currently under discussion (Box 1.1).

Chile is now at a critical junction where many decisions are being taken that are likely to shape the future of its society and economy for years to come. That makes it particularly crucial to base reform decisions on all the available evidence, both domestically and internationally. While reforms are the only way to overcome current challenges, it is also worthwhile to preserve what has worked well in the past, such as the strong and well-functioning institutions that have been a backbone of Chile's success.

In addition to the current challenges such as high inflation, significant underlying growth challenges will have to be addressed over the next years. A long-standing process of income convergence to advanced economies has gone into reverse since 2014, relative to the OECD average (Figure 1.1). Productivity has been stagnant or even decreasing, and structural reform efforts have fallen short of what is needed to lift it. Boosting productivity has become a key priority, including for raising export competitiveness, and export diversification could make further progress. Investment in new technologies has been weak, and important parts of the economy could benefit from stronger competitive forces, in part related to cumbersome regulations that hold back new entry and investment.

Figure 1.1. Income convergence has reversed



Source: OECD, Productivity database; World Bank, WDI.

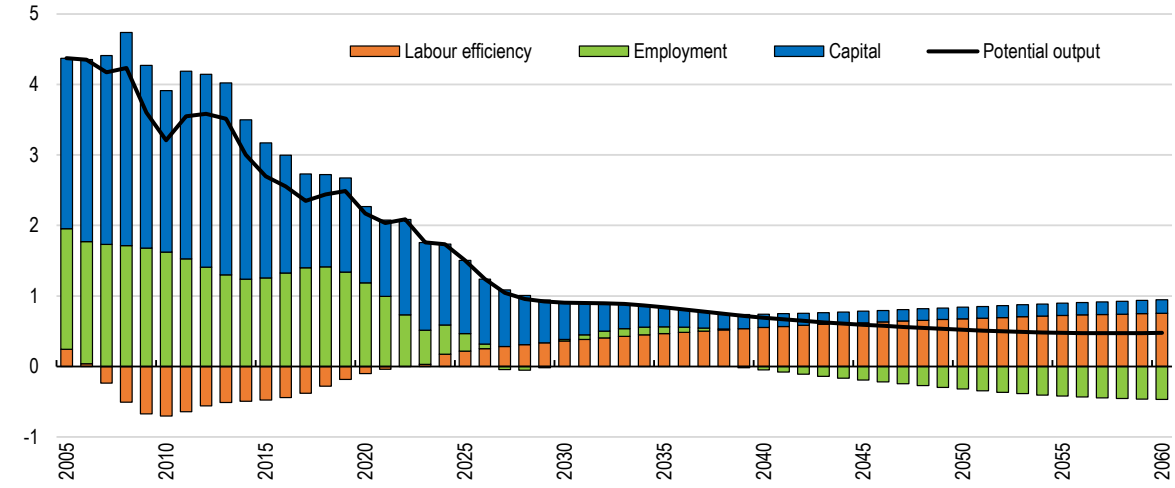
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Chile's longer-term growth outlook will largely depend on its ability to address existing structural growth bottlenecks to lift productivity and investment. The prospects for future employment growth, which has been a significant source of growth in the last two decades, are largely determined by demographic factors. A rapid process of population ageing will reduce Chile's labour force, and with that the economy's growth potential, unless productivity can be raised. The share of those 65 years and older has risen from 3.4% in 1950 to 12.2% in 2020, and is set to exceed 30% by 2065, despite some expected beneficial effects from recent immigration. All else equal, this process would reduce the economy's growth potential to only a quarter of its current levels, i.e. from around 2% to 0.5% per year, over the next 30 years (Figure 1.2). This is far below the average GDP growth of 3.8% between 2000 and 2019.

Lower income growth will significantly limit the scope for public policies to improve social inclusion and provide better opportunities for all Chileans. Only policy reforms that manage to raise productivity and investment will be able to generate the income and tax revenues that will allow Chile to advance on its path towards more, and more widely shared prosperity.

Figure 1.2. Potential growth is set to decline as the population ages rapidly

Contributions to potential output growth per capita



Source: OECD Economic Outlook database.

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At the same time, doing the right reforms has sizeable potential to improve living standards. Simulations based on the OECD long-term growth model (Guillemette and Turner, 2018[3]) suggest that an ambitious reform package that would strengthen Chile's institutional setup, improve domestic regulation and competition to boost productivity and improve education outcomes would be able to double GDP per capita by 2060, as opposed to a cumulative increase of 26% without any reforms (Figure 1.3). This reform boost would be sufficient to return to a path of income convergence vis-à-vis the United States and other advanced OECD countries.

Box 1.1. Recent reforms

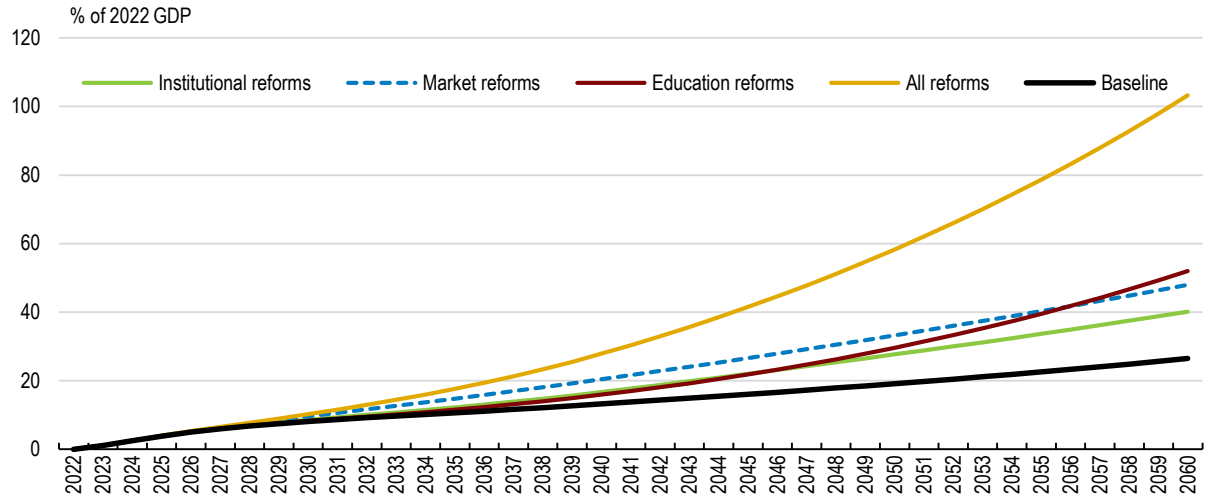
- Pension levels and coverage were increased through a new guaranteed universal pension approved in early 2022, with benefit levels equivalent to the poverty line for those aged 65 years and above, except for the most affluent 10% of the population.
- The minimum wage was increased by 17% in nominal terms in mid-2022, coupled with wage subsidies to compensate small firms for 53% of the increase.
- In response to rising energy prices, employment subsidies for low-income workers were extended in April 2022 until the end of the year. In addition, targeted cash transfers and support to firms in particularly affected sectors were bolstered through the "Chile Apoya" plan, worth 1.2% of GDP.
- A tax reform proposal was published in June 2022 to raise an additional 4% of GDP in tax revenues from personal income taxes, more effective taxation of capital income and capital gains, higher copper royalties, and improvements in tax administration.
- The tax reform proposal includes stronger incentives for productivity-enhancing investments and in particular, investments in research and development.
- A new long-term Climate Strategy has established legally binding net zero emission targets while promoting adaptation and increasing resilience against adverse climate events.

Besides boosting the engines of income growth, pressing social needs will necessitate a growing attention to how incomes and opportunities are distributed. The small size of Chile's public sector limits its ability to provide better public services and opportunities for all, and to reduce inequalities. Public education and health services have significant scope for narrowing the quality gap vis-à-vis private institutions. Pension replacement rates were already low before the pandemic, and many pension accounts are now depleted following three extraordinary withdrawals during the crisis, likely resulting in future fiscal contingencies. More than a quarter of the workforce is in informal labour relationships, depriving them of access to better protection. Women represent 51% of the population but only 41% of the workforce, and they suffer a pay gap of approximately 20%. Better access to quality childcare and early childhood education would allow more women to work.

Finally, environmental challenges and risks loom large, but also provide significant opportunities for the future. The high fossil content of the energy matrix contrasts with Chile's strong potential in renewable energy generation. Few countries in the world can match Chile's meteorological conditions for the production of solar and wind energy, and new export opportunities may become available through the development of a green hydrogen industry. However, concerted efforts will be needed to develop new energy sources for the future, and the transition is likely to involve a significant role for public policies.

Figure 1.3. Ambitious structural reforms are estimated to lift incomes significantly

Simulations using the OECD Long term growth model



Note: The "Baseline" projection depicts the trajectory of potential per-capita GDP in Chile according to current estimations of potential growth, without any reform effects. The "Institutional reforms" scenario includes reforms to strengthen institutions and make them more inclusive, through a gradual alignment of the Rule of Law index (Kaufmann, Kraay and Mastruzzi, 2015[4]) with the current OECD average by 2060, implemented gradually over time. The "Market reforms" scenario implies an improvement in product market regulations to make them more competition-friendly, as measured by the OECD PMR indicator, to the top decile level of OECD countries, an increase in public investment to 4% of GDP, and an increase in R&D expenditures to 1% of GDP, all by 2030. The "Education reform" scenario aligns student performance and educational attainments with the OECD average.
Source: OECD calculations based on OECD Long-term growth model (Guillemette and Turner, 2018[3]).

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Against this background, the main messages of this Survey are:

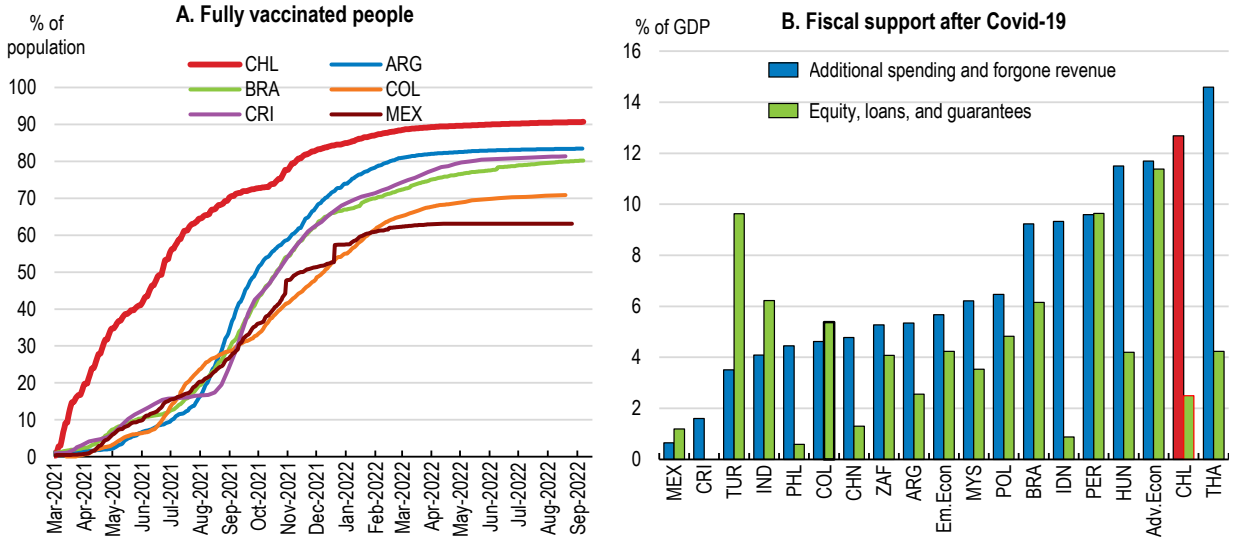
- Fiscal policy should be consolidated in the short-term, while medium-term fiscal sustainability should be ensured by enhancing the current fiscal rule with a debt anchor. Additional public revenues will be required to improve public services and provide better opportunities to all Chileans.
- Raising productivity will hinge on more competition-friendly regulations, stronger competition and more investment into research and development and human capital.
- Supporting vulnerable groups will require deep changes to social security benefits and their financing to strengthen incentives for formal job creation.

The outlook has weakened and is subject to significant risks

After a stellar recovery from Covid-19, growth has collapsed

After a deep recession in 2020 when GDP fell by 6.2% due to the Covid-19 pandemic, the economy had a stellar recovery during the second half of 2020 and throughout 2021. This led to growth of 11.9% in 2021, with GDP levels surpassing pre-pandemic levels by 8% at the end of 2021, and eventually to significant overheating. One factor that can help to explain this strong rebound was a well-planned vaccination rollout that not only advanced more rapidly than in any other country in the region, but has also reached further, with over 90% of the population fully vaccinated by mid-2022 (Figure 1.4, Panel A). A second explanation was exceptionally strong policy support. Chile's fiscal response at over 12% of GDP was one of the highest among emerging markets, and even exceeded the average response in advanced economies in terms of additional spending and foregone tax revenue (Figure 1.4, Panel B).

Figure 1.4. Covid-19 triggered a strong vaccination campaign and exceptional fiscal support



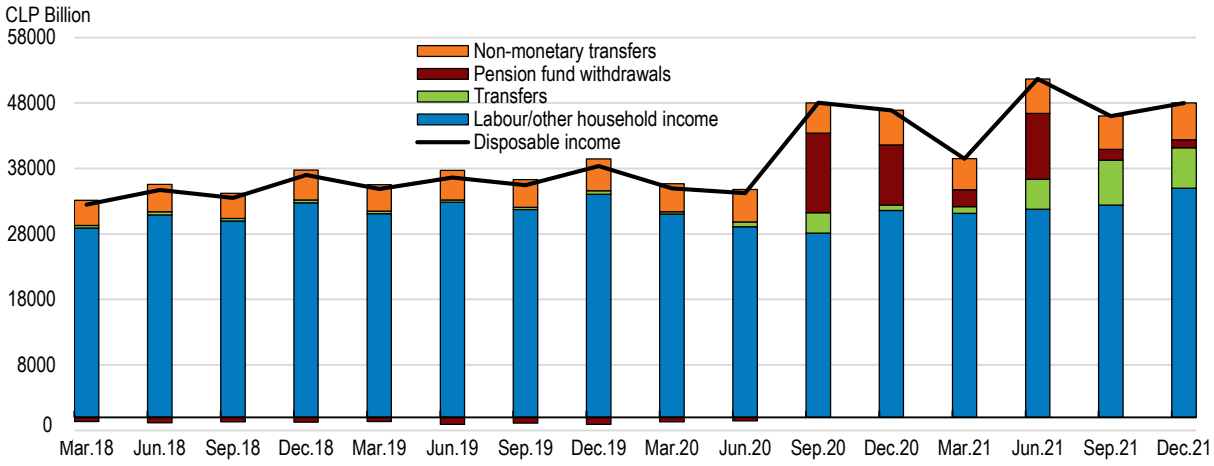
Note: Estimates as of September 27, 2021. Em Econ = simple average of emerging economies shown in chart. Adv Econ = simple average of AUS, BEL, CAN, CHE, CZE, DEU, DNK, ESP, FIN, FRA, GBR, ITA, JPN, KOR, NLD, NOR, NZL, SGP, SWE, USA.
Source: Center for Systems Science and Engineering at Johns Hopkins University; Our World in Data; IMF Database of Country Fiscal Measures in Response to the COVID-19 Pandemic, available at https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19.

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By the end of 2021, emergency transfers reached almost 16 million beneficiaries or 83% of the population. In addition, three rounds of early withdrawals from individual pension accounts released liquidity worth around 18% of GDP to households. This significant support totalling 30% of GDP overcompensated the loss labour of incomes during the pandemic and was not concentrated on low-income households, with household disposable incomes exceeding average 2019 levels by more than 40% in mid-2021 (Figure 1.5). This triggered a large temporary boom in the economy, fuelled by high consumption of durables, and supported production and investment in several manufacturing sectors, but inflation rose substantially to 12.5% in year-on-year terms in June 2022.

Figure 1.5. Pandemic-related policy measures have far overcompensated household income losses

Household disposable income



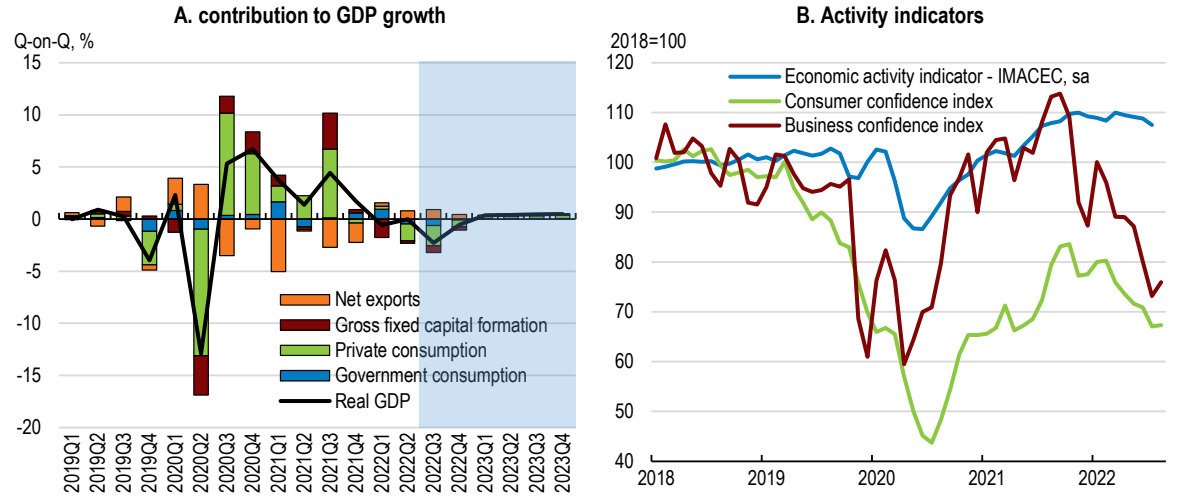
Source: Central Bank of Chile.

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As policy support was gradually withdrawn and household consumption slowed on the back of high inflation, economic growth collapsed and GDP contracted in the first quarter of 2022 and stagnated in the second quarter (Figure 1.6, Panel A). Economic sentiment declined throughout the first half of the year (Figure 1.6, Panel B). By contrast, services started to contribute positively to activity, reflecting the gradual removal of remaining Covid-19 restrictions. Investment fell in the first half of 2022, and early investment indicators such as business confidence suggest an ongoing slowdown in investment momentum.

The labour market has been recovering gradually and formal-sector dependent employment now exceeds pre-pandemic levels. Still, overall employment and labour participation, which dropped in 2020 as discouraged job seekers abandoned their efforts during the lockdowns, remain more than 3% below average 2019 levels (Figure 1.7, Panel A). Job losses affected particularly informal workers, which account for more than a quarter of the workforce, but also women and youths, exacerbating pre-existing inequalities. Now the job recovery is also advancing more slowly among these groups, in line with developments in other countries in the region. Up until July 2022, the unemployment rate decreased to 7.6% despite more people returning to the labour force. This level is significantly lower than in other countries in Latin America (Figure 1.7, Panel B).

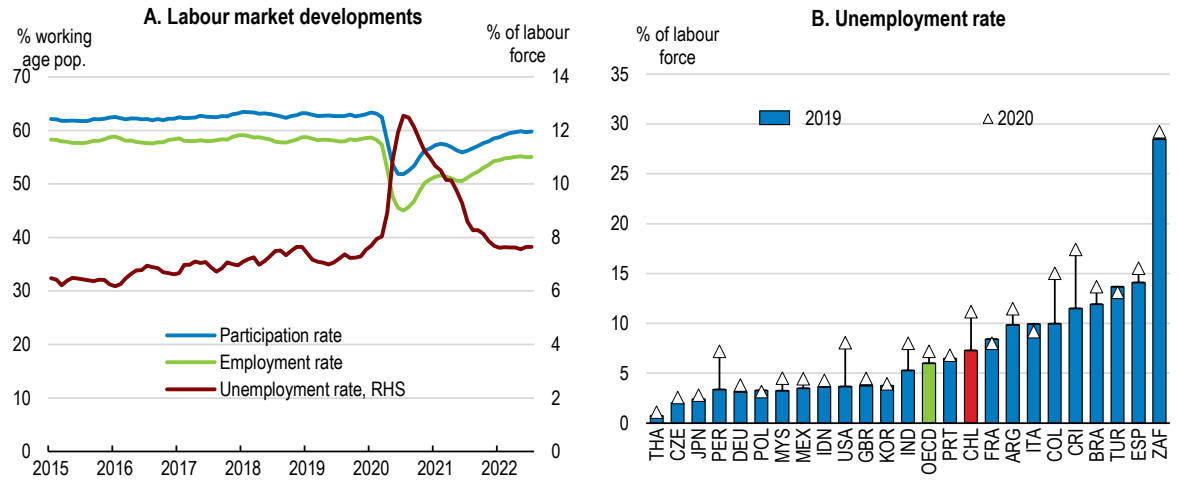
Figure 1.6. Consumption and growth are slowing down amid low confidence



Source: OECD projections, Central Bank of Chile.

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Figure 1.7. The labour market is recovering gradually



Source: INE; CEIC; World Bank WDI.

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Inflation has risen to 14.1% year-on-year in August 2022 as higher energy and food prices resulting from the Russian aggression on Ukraine have added to inflationary pressures from strong consumption demand, particularly through the price channel and supply bottlenecks, as Chile imports both oil and liquified natural gas at now significantly higher prices, but also through lower growth in European trading partners. A vehicle fuel price stabilisation mechanism created in 2014 is now being used to cushion the burden on households resulting from global price increases, and additional fiscal resources are being deployed to replenish it, along with price smoothing mechanisms for heating fuels and electricity prices. Price freezes have been established for public transport fares, while the effects of higher food prices are largely addressed through targeted transfers that rise automatically with inflation. Looking ahead, Chile's sophisticated system of public transfers and its strong underlying social registry would allow it to rely more on targeted transfers to cushion the impact of energy prices rather than price stabilisation mechanisms with implicit subsidies.

Growth is projected to slow to around 1.9% in 2022 and -0.5% in 2023 (Table 1.1), although annual growth in 2022 is heavily influenced by statistical carryover effects. In the near future, quarterly GDP contractions are likely to continue until the last quarter of 2022, as high inflation and rising interest rates curtail household purchasing power. These forces will continue to weigh on consumption growth during 2022 and 2023. Pre-pandemic employment levels will be recovered gradually, supported by ongoing hiring subsidies. Low business confidence suggests that investment is also likely to remain weak in the near term, with policy uncertainty, partly related to the implementation of the new constitution, and higher interest rates impeding a stronger investment performance. Inflation is projected to ease and converge gradually to the target in early 2024, as continuous monetary policy tightening takes its effect, and the economy slows down.

Table 1.1. Macroeconomic indicators and projections

	2017	2018	2019	2020	2021	2022	2023
National accounts (% changes, seasonally-adjusted at 2015 prices)							
Gross domestic product (GDP)	1.6	4.0	0.7	-6.2	11.9	1.9	-0.5
Private consumption	3.6	3.8	0.8	-8.2	20.5	2.1	-1.9
Government consumption	4.7	3.2	0.5	-4.1	10.4	4.1	-2.2
Gross fixed capital formation	-3.3	6.5	4.7	-9.7	18.0	-2.4	-1.8
Final domestic demand	2.1	4.3	1.7	-8.0	18.3	1.2	-1.9
Stockbuilding[1]	1.0	0.7	-0.7	-1.6	3.0	1.8	0.1
Total domestic demand	3.1	5.0	0.9	-9.4	21.7	3.0	-1.7
Exports of goods and services	-1.0	5.1	-2.5	-1.2	-1.5	1.6	2.1
Imports of goods and services	4.5	8.6	-1.7	-12.8	31.2	5.2	-1.4
Net exports[1]	-1.5	-1.0	-0.2	3.5	-8.9	-1.2	1.3
Other indicators (growth rates, unless specified)							
Unemployment rate (% of labour force)	7.0	7.4	7.2	10.7	8.8	7.8	8.0
Consumer price index	2.2	2.4	2.6	3.0	4.5	11.1	6.4
Consumer price index December-on-December	2.3	2.6	3.0	3.0	7.2	11.9	3.9
Core consumer price index	2.0	1.9	2.6	2.3	3.8	9.0	3.8
Core consumer price index December-on-December	1.9	2.3	2.5	2.6	6.4	9.5	5.2
Current account balance (% of GDP)	-2.8	-4.6	-5.2	-1.7	-6.6	-8.5	-6.7
Central government net lending (% of GDP)	-2.8	-1.7	-2.9	-7.3	-7.7	-0.1	-2.6
Central government gross debt (% of GDP)	23.7	25.8	28.3	32.5	36.3	38.2	40.9

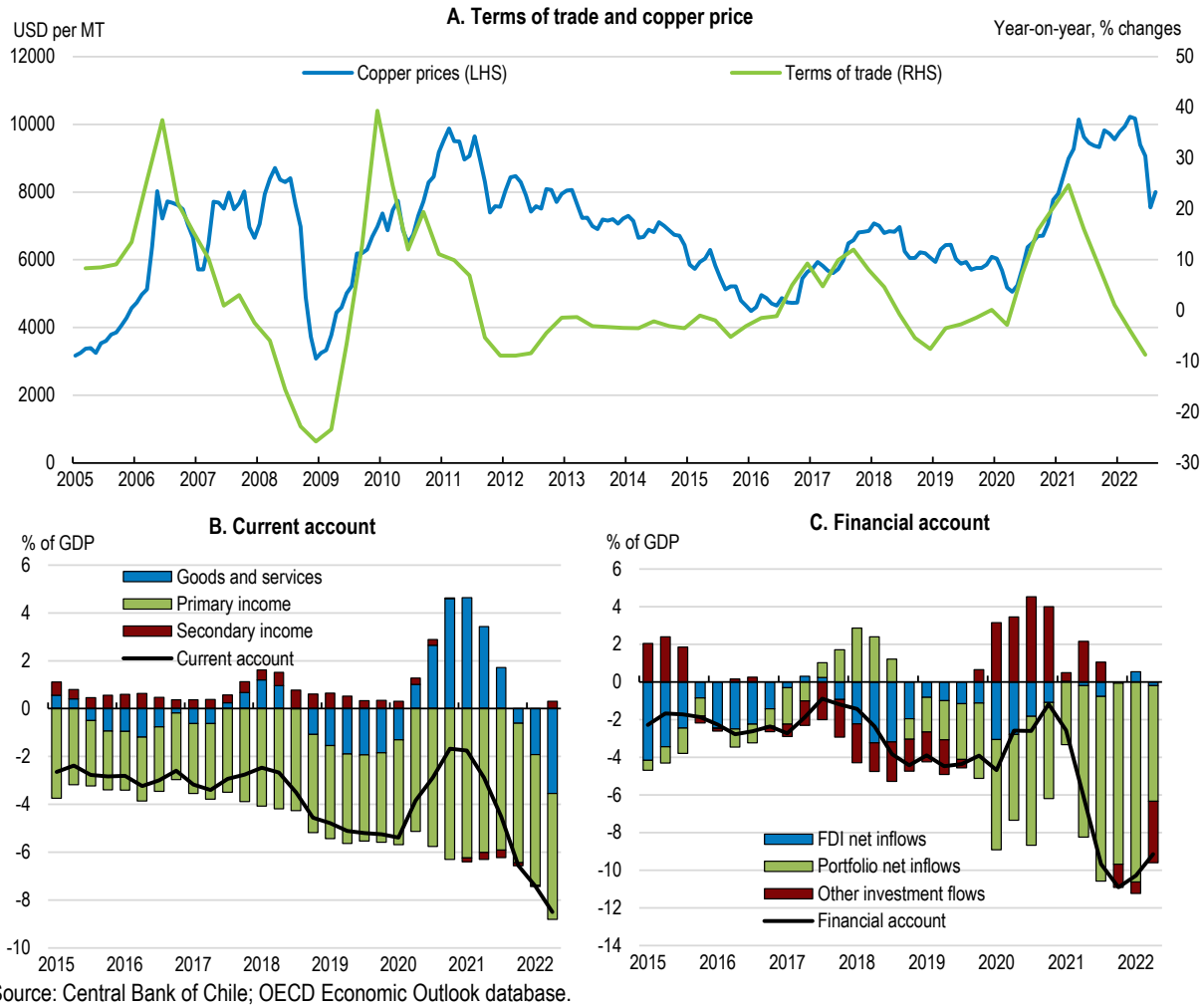
1. Contribution to changes in real GDP.
Source: OECD projections, OECD Economic Outlook Database, INE, Central Bank.

A widening current account deficit is projected to peak in 2022, on the back of higher global energy prices and a substantial deterioration of the terms of trade. Exports have been weakened by contracting copper production, mostly related to supply-side challenges like water restrictions, shipping delays and policy uncertainty. Imports of machinery and equipment remained fairly strong in early 2022. In 2023, strong copper prices and more robust production in key export sectors such as chemical products and mining derivatives in combination with lower consumer and investment demand for imports will improve the current account balance.

Risks around the recovery remain substantial

Both domestic and external risks are unusually high and tilted to the downside at the current juncture. On the external side, the Russian aggression on Ukraine could lead to longer-lasting energy and food inflationary pressures that would make it more difficult to bring inflation back to target, and could require tighter financial conditions to cool down domestic demand. Further currency depreciation could amplify these pressures. Sudden sentiment changes in global financial markets, possibly related to surprises in the conduct of monetary policy in advanced economies, could limit financial inflows and increase financing costs for emerging market economies such as Chile. A sharper slowdown in China, the main trading partner, is another risk to growth, including through export and investment demand. Upside risks to growth are sustained higher copper prices and a faster resolution of global supply bottlenecks.

Figure 1.8. The current account deficit has widened amid deteriorating terms of trade



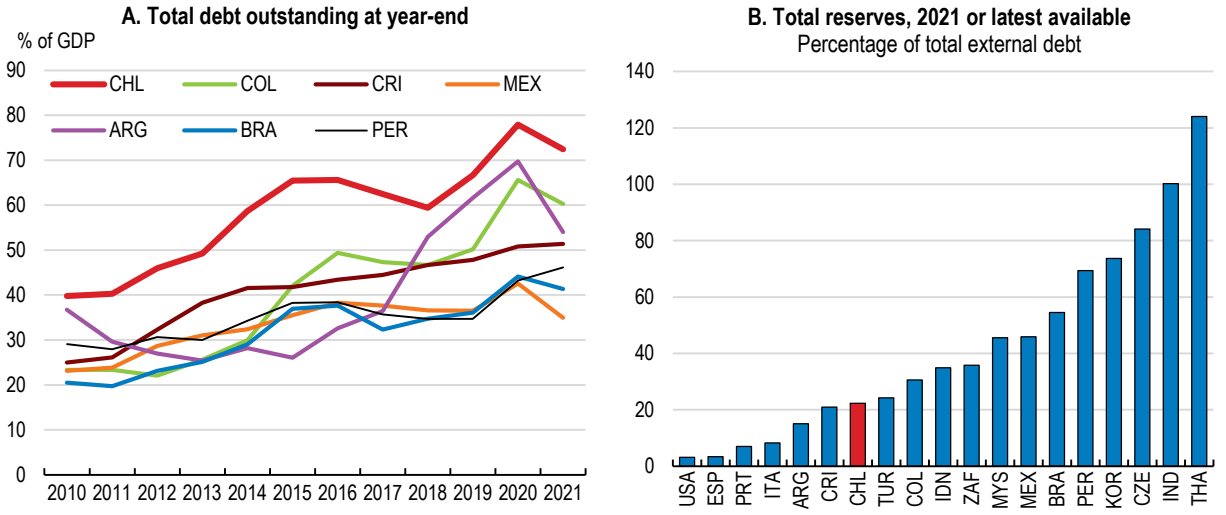
Source: Central Bank of Chile; OECD Economic Outlook database.

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Developments in external accounts have made the economy more vulnerable to swings on global capital markets than in the past. The current account deficit widened to 6.6% of GDP in 2021, reflecting the consumption boom driven by public transfers and the extraordinary pension fund withdrawals, especially for imported durables, and higher prices of energy imports, which outweighed strong copper prices and led to a decline in the terms of trade (Figure 1.8). This deficit is largely financed by portfolio capital inflows, which tend to be more volatile than direct investment flows. As the consumption patterns normalise, the current account deficit should narrow again, but there is a risk that it would remain large. In terms of stocks, however, Chile's position is stronger than in most emerging market economies as the net international investment position rose from -10.8% of GDP in 2020 to -5.5% of GDP in 2021. OECD projections point to a further deterioration of the current account balance to -8.5% of GDP in 2022, before improving slightly to -6.7% of GDP in 2023 on the back of slowing domestic demand.

Moreover, external debt has been on an upward trend and amounted to 72% of GDP in 2021 according to the IMF definition, which is high in a regional comparison (Figure 1.9, Panel A). Slightly more than a third of that debt, or 28% of GDP, is owed by the private non-financial sector, mostly in the form of securities and long-term loans. Around 20% of total external debt is covered by foreign-exchange reserves that would cushion the economy from any immediate impact (Figure 1.9, Panel B). Access to a novel one-year Short-term Liquidity Line (SLL) arrangement with the International Monetary Fund, amounting to 1.1% of GDP, will provide an additional backstop against external risks (IMF, 2022[5]).

Figure 1.9. External debt is substantial and foreign exchange reserves provide some buffer



Source: IMF IFS and WEO databases.

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Political risks also remain, particularly since the rejection of the draft proposal for a new constitution in September 2022. So far, the social unrest of 2019 has been channelled into a democratic reform process, but if that were to change and new episodes of social unrest took place, this could affect the trust in Chile's institutions and curtail prospects for investment and consumption.

Financial stability risks seem contained, but financial market depth has declined

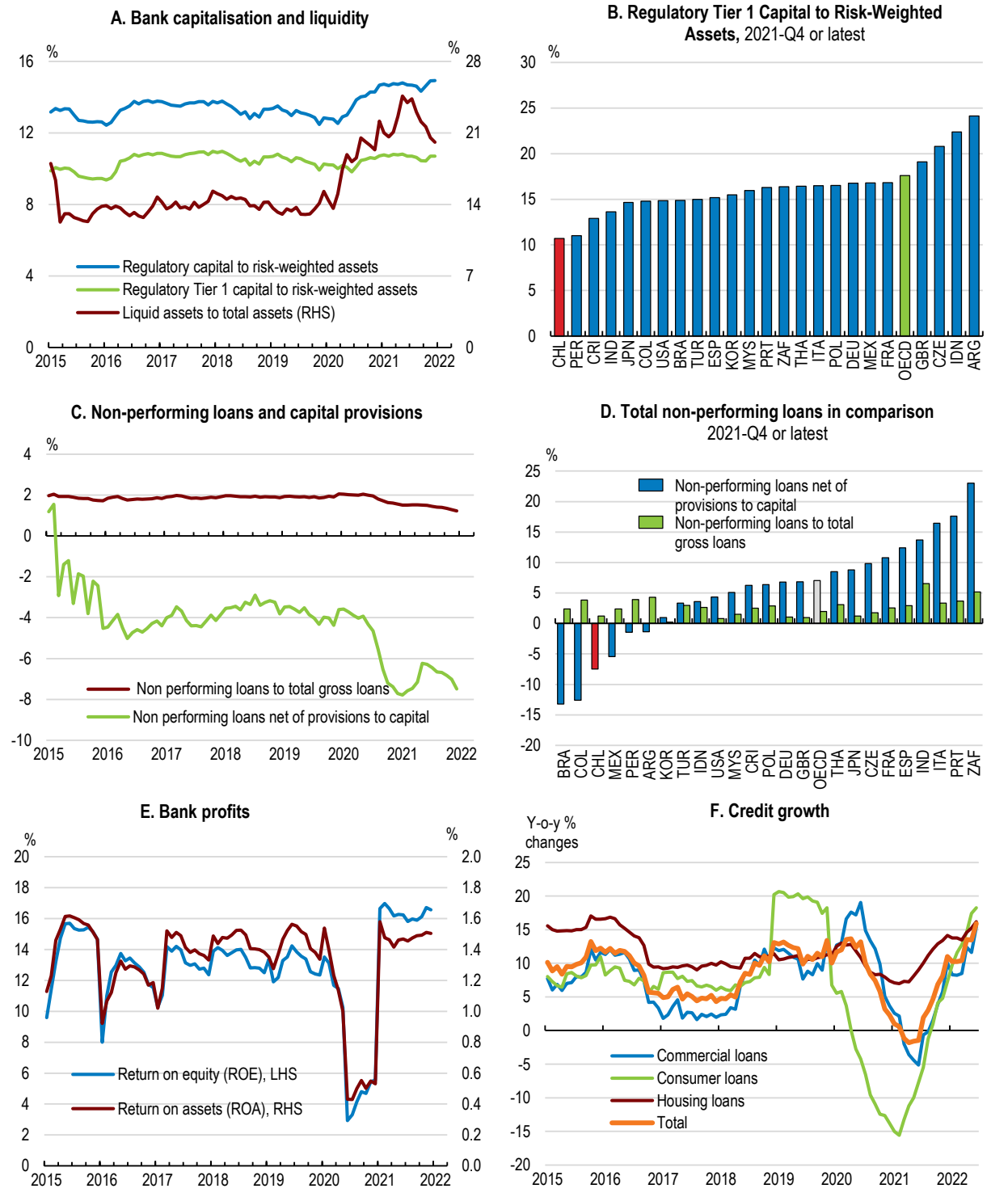
The deterioration of financial conditions, the widening of macroeconomic imbalances related to the strong policy boost to aggregate demand in 2021 and lower growth prospects going forward imply rising challenges for financial markets, exacerbated by higher global risks and volatility. The resulting risks, however, are mitigated by a relatively favourable starting position. Banking system capitalisation exceeds regulatory floors, even if regulatory tier 1 capital is low compared to other emerging and advanced economies (Figure 1.10). Basel III rules are being implemented as of December 2021, which will improve capital buffers. Non-performing loans have diminished to historic lows during the Covid-19 pandemic, despite a small uptick among consumer loans, and banks have bolstered provisions, resulting in a substantial excess coverage (Figure 1.10, Panel C). Bank profits have returned to pre-pandemic levels. Stress tests undertaken by the Central Bank and the IMF suggest that solvency indicators would exceed regulatory requirements even under severe stress (Banco Central de Chile, 2022[6]; IMF, 2021[7]).

Household indebtedness of 77% of disposable incomes remains high in a regional context, although below the OECD average of 105%. It declined by almost 7 percentage points during 2021 as some households made use of the extra liquidity afforded by the pandemic support to pay down debt (Banco Central de Chile, 2022[8]). Home prices rose vigorously in the first half of 2021, before starting to decline in the second half. Credit standards for mortgages have tightened and lending has slowed down. Some corporate borrowers were able to benefit from the strong consumption boom in 2021, and overall corporate indebtedness has declined, while lending standards have tightened for corporate bank loans and risk premiums in the local corporate bond market have edged up (Banco Central de Chile, 2022[6]).

The pandemic policy response is leaving a strong mark on Chile's financial markets. Pension fund withdrawals of approximately 18% of GDP required funds to liquidate long-term assets in their portfolio and reduced financial market depth, at the same time as households depleted their pension savings. Local long-term interest rates rose in response, and the maturities of bonds issued by banks, firms and the treasury shortened substantially, which together with tightening domestic and global financial conditions narrowed the scope to finance Chile's future investment needs. The smaller domestic financial market will also imply stronger recourse to external and foreign-currency borrowing in the future, increasing external vulnerabilities. Corporate bond issuance has already shown first signs of that (Banco Central de Chile, 2022[6]).

Chile's deep financial markets and the availability of private long-term credit are one of the features that have set it apart from many other countries in Latin America with substantially shallower financial markets (Figure 1.11). These have afforded Chilean enterprises lower costs of capital, more borrowing and investment opportunities and bolstered their resilience to shocks. Consumers in Chile have enjoyed consumption smoothing opportunities like no other Latin American countries, including the existence of deep long-term mortgage markets at fixed rates, which are not a common feature in Latin America. Now the share of new fixed-rate mortgages declined from over 90% in late 2019 to 41% in early 2022 (Figure 1.11, Panel D). These recent events were a significant blow to Chile's capital market. Looking ahead, it will be crucial to channel at least parts of new pension contributions into savings, which would continue to be invested in Chile's financial markets, to preserve Chile's distinct competitive advantage in access to credit.

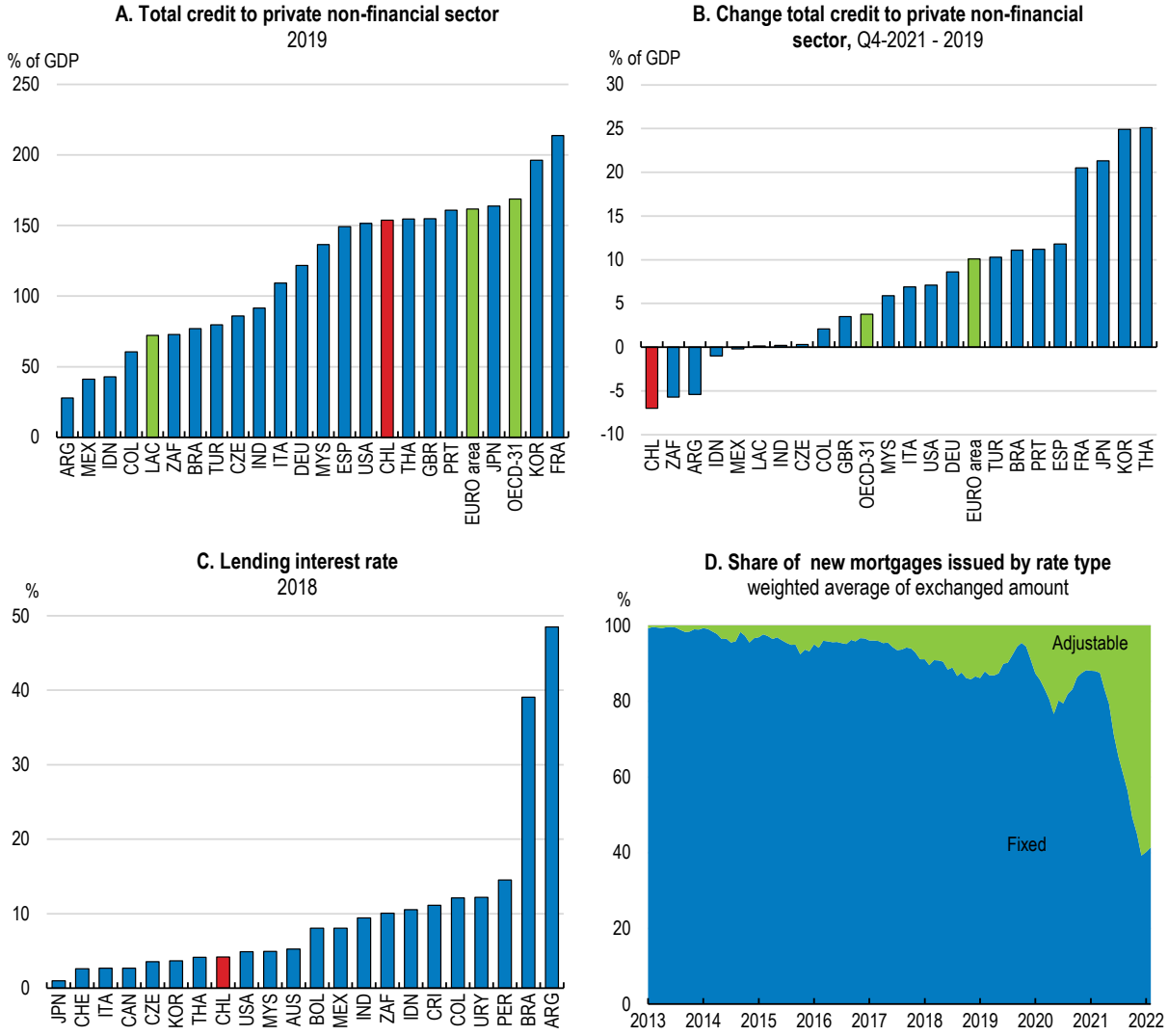
Figure 1.10. Financial stability indicators



Source: CEIC, BIS, Central Bank of Chile.

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Figure 1.11. Chile's traditionally deep credit markets have become shallower and riskier



Note: Domestic credit to private sector refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment. Data for Argentina refer to 2017.
Source: International Monetary Fund, International Financial Statistics; BIS; Central Bank of Chile.

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Chile is particularly vulnerable to climate change

Long-term vulnerabilities for economic growth include environmental risks, renewed flare-ups in social unrest, and slower growth in China, which is Chile's main trading partner and the destination for 38% of exports (Table 1.2; also Figure 1.27). Chile's exposure to the copper price is another source of vulnerability, although long-term price declines are unlikely given that copper is a key input for the global energy transition towards electricity from renewable resources.

Chile is particularly vulnerable to climate change due to the variety of geographic conditions and fragile ecosystems, including a 6.400 km coastline, vast arid areas, forests, and ice caps that are extremely susceptible to global warming. Exposure to natural disasters, such as fires and droughts, has increased in recent years, mostly driven by human activities such as deforestation, mining, land degradation, and air pollution. A 13-year-long drought required elaborating contingency plans for water rationing in 2022, and a 60% decrease in precipitation levels is expected for the northern and central regions by the end of the

century. Small variations in the average temperature could imply the disappearance of forests and arable areas in most of the territory, affecting the life, health, and well-being of millions of Chileans. This will also affect asset valuations, as around 30% of properties in Chile will be exposed to climate risks by 2050 (Banco Central de Chile, 2022[9]). The Central Bank has recently started to incorporate climate-related risks into its stress tests and financial stability monitoring tools (Banco Central de Chile, 2022, pp. 32-44[6]). Moreover, an inter-ministerial committee is trying to measure natural capital, in order to take this dimension in the development of public policies.

Table 1.2. Potential major medium-term vulnerabilities

Uncertainty	Possible outcome
Environmental risks related to climate change	Fires, droughts, water rationing, lack of arable land, stronger need for food imports.
After the massive withdrawals from individual pension accounts, financial markets have become more shallow.	Lower growth due to lower availability of finance for investments. Lower capacity to absorb future shocks.
Uncertainty surrounding the process of drafting a new constitution has risen following the rejection of a draft in a nationwide referendum in September 2022.	Renewed social unrest, political instability and policy uncertainty.
Slower economic growth in China	Lower import demand and growth.

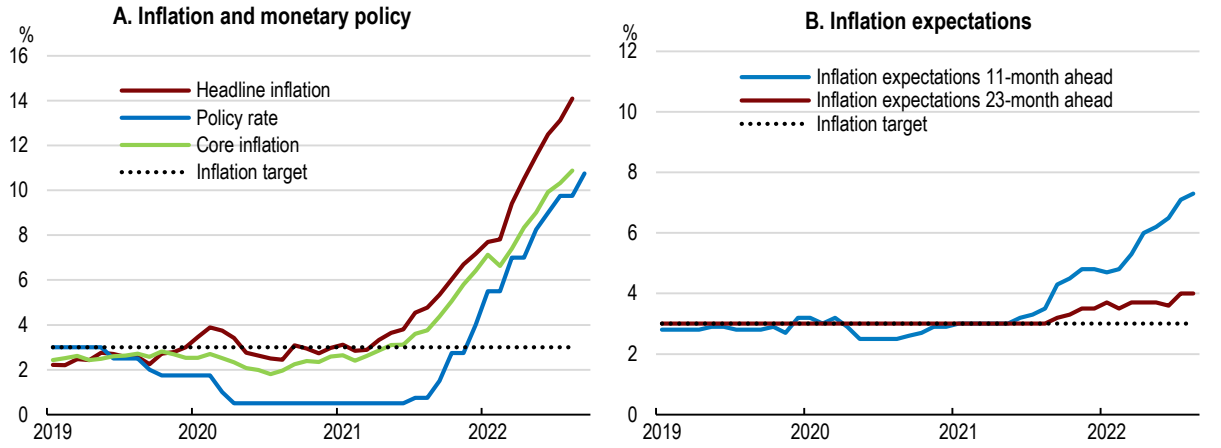
Monetary policy will need to remain restrictive to fight high inflation

Traditionally, Chile's monetary policy has been guided by a highly credible inflation-targeting framework and a flexible exchange rate regime. The strong fiscal stimulus, most of which took place in 2021, gave rise to mounting inflationary pressures during that year, with inflation beginning to rise above the Central Bank's 3% target as of March 2021, and exceeding that target by 7.5 percentage points by April 2022 (Figure 1.12). Rising prices reflected initially a domestic consumption boom induced by extraordinary fiscal policy support to households. As a result, the output gap closed as early as mid-2021 and overheated visibly during the second half of 2021. While households used some of the extra liquidity from transfers and pension fund withdrawals to pay down debt, the rest was consumed right away, surprising many observers, with household savings remaining at a fairly low 4.5% of GDP in late 2021. Inflationary pressures were broad-based and hence quickly showed up in core inflation as well.

As of early 2022, global inflationary pressures stemming from higher food and energy prices as a result of the Russian aggression on Ukraine added to an already complicated inflation picture, with currency depreciation amid domestic political uncertainty adding on. Inflationary pressures have become wide-spread across components of the consumer price index, although somewhat more moderate in services, some of which are subject to regulated prices. Wages have increased by 9.7% year-on-year in July 2022, falling short of inflation, but above the 3.6% wage growth of 2019. The risk of a wage-price spiral therefore appears limited at this point, but remains to be watched carefully. Inflation expectations, which have traditionally been well-anchored due to the strong credibility of Chile's independent Central Bank, are now significantly exceeding the 3% target not only over a horizon of 12 months, but also over 24 months, the relevant horizon for monetary policy (Figure 1.12, Panel B). Price indexation is widespread in Chile, leading to more persistent inflation (Naudon and Vial, 2016[10]).

Monetary policy acted early to stem inflationary pressures, with 9 rate increases since July 2021, and a total of 925 basis points of rate increases since then. Financial conditions have tightened substantially as a result of these rate hikes, with an increase in the ex-ante real interest rate from -2.5% in 2021 to almost 5.8% in June 2022. This decisive action is showing some early fruits, as investment is contracting and household consumption is stalling, while real estate transactions and mortgage applications are slowing down.

Figure 1.12. Monetary policy has reacted early, but inflation expectations remain high



Source: CEIC; Central Bank of Chile; OECD calculations.

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Looking ahead, the early monetary policy reaction should allow the tightening cycle reach an end soon as the economy is slowing down sharply and excess demand vanishes. Moreover, the effects of more recent tightening will take time to materialise and a significant part of inflation is imported. On the basis of currently available information, monetary policy will need to remain tight for some time to bring inflation back to the target and to firmly re-anchor inflation expectations. Regulatory policy measures that have the potential to boost competition and reduce prices could accompany monetary policy action, and achieving such price reductions would be particularly valuable in the current high-inflation context.

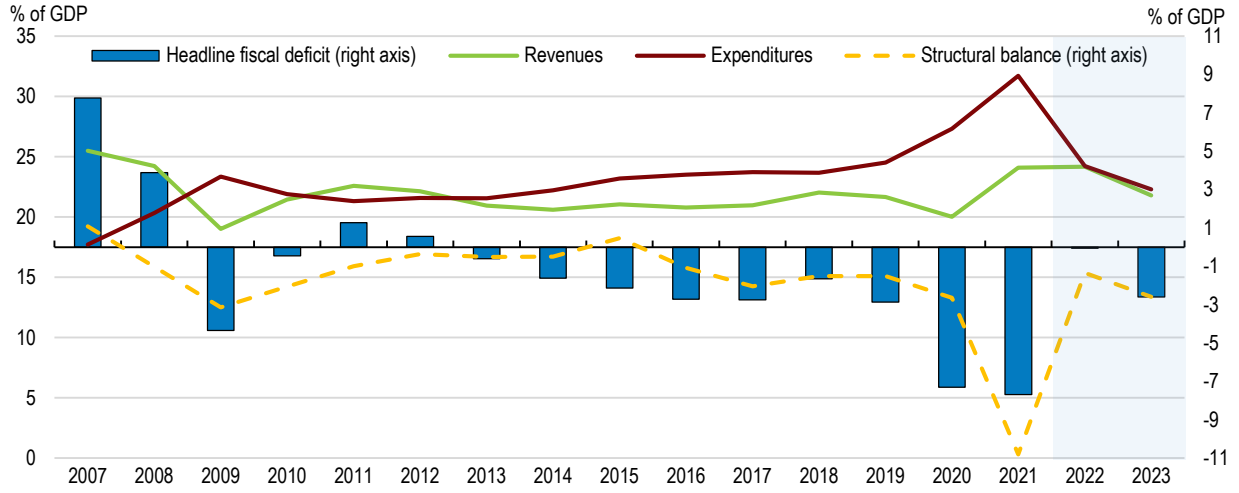
Fiscal policy will require adjustments in the short and long run

A fiscal consolidation is required to ensure prudent debt levels

While the strong fiscal policy response supported a rapid recovery, its back-loaded timing and excessive impulse impeded an effective stabilisation of the economy, and can help to explain the renewed economic slowdown in 2022 and 2023. The fiscal expansion reached its peak in 2021 when the economy had already recovered, driving the headline fiscal deficit to a 30-year high of 7.7% of GDP in 2021 (Figure 1.13). The 2021 structural fiscal balance, which takes into account cyclical effects related to the strong recovery and high copper prices, was even more expansionary at -10.8% of GDP (DIPRES, 2022[11]). This suggests that the cyclical position of the economy would have called for a reduction of the fiscal impulse in 2021, rather than an expansion.

The bulk of this additional spending was emergency cash transfers, totalling 10.6% of 2021 GDP (Figure 1.14). The lion's share was the Emergency Family Income whose accumulated cost reached almost 8% of 2021 GDP by the end of that year. Until March 2021, this was restricted to the poorest 40% of the population, but its targeting deteriorated and its fiscal cost rose sharply when eligibility was extended to the bottom 90% of the population thereafter. As a result, the largest expansion of emergency transfers took place in the second half of 2021, when the output gap had already closed.

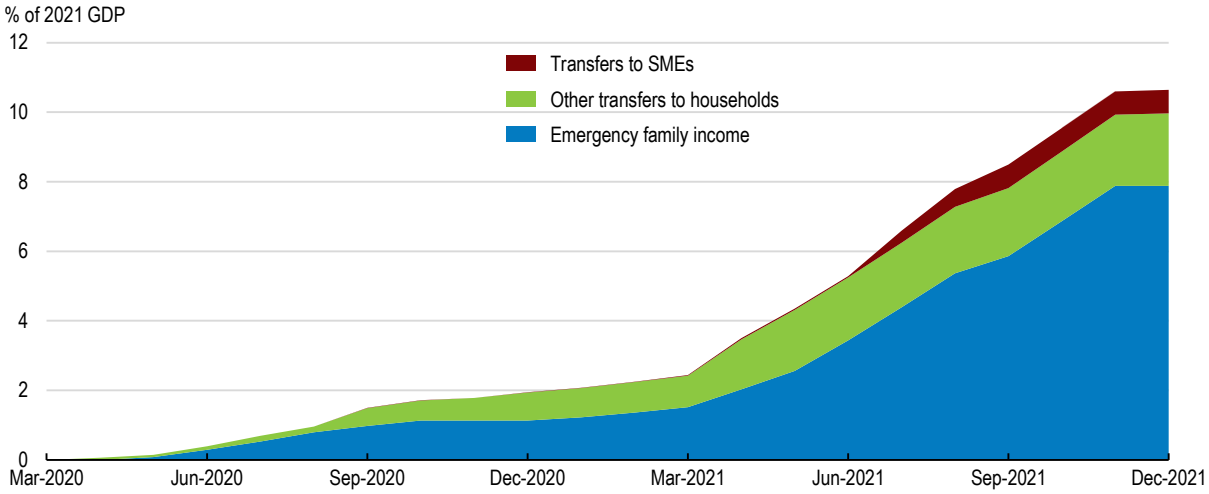
Figure 1.13. Rising public expenditures led to a substantial widening of the fiscal deficit



Note: The shaded 2022 and 2023 data are current government plans, adjusted for OECD GDP projections.
Source: OECD calculations based on Ministry of Finance IFP 2/2022, available at http://www.dipres.cl/598/articles-279125_Informe_PDF.pdf.

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Figure 1.14. Emergency transfers rose strongly during 2021



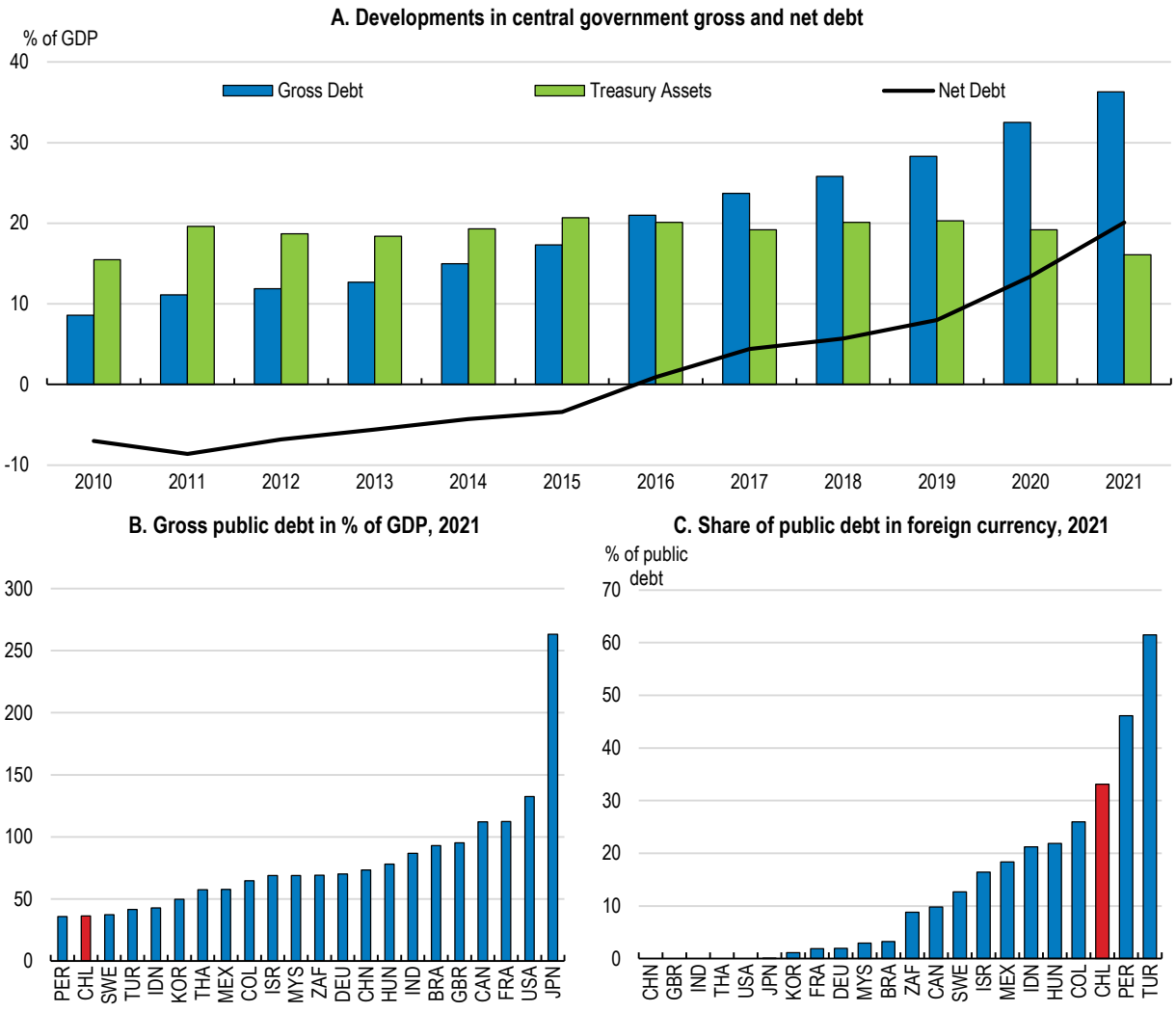
Note: Other transfers to households include Bono Emergencial, Bono Clase Media y Pensionados, Bono Covid Navidad, Cajas alimentos. Transfers to SMEs include Bono Apoyo a Pymes and Bono Transportistas.
Source: OECD calculations based on Ministry of Finance data.

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The massive spending was financed by drawing on savings in sovereign wealth funds, with central government assets declining by 4.2% of GDP between 2019 and 2021, and new debt issuance, as gross debt rose by 8 percent of GDP, to reach 36.3% of GDP in 2021 (Figure 1.15, Panel A). In comparison to other emerging market economies, Chile's public debt remains at a moderate level, although tax revenues are also comparatively low. Public debt is less exposed to exchange rate risks, as 65% of Chile's gross public debt is domestically issued and denominated in local currency (Figure 1.15, Panels B and C). More than half of Chile's public debt has a maturity above 8 years and market perceptions about Chilean public bonds remain favourable relative to other countries in the region, despite a slight deterioration in early 2022.

Despite this relatively favourable static picture of Chile's public finances, the dynamics give more reason to remain prudent. Gross and net public debt have risen steadily over the last decade, suggesting that the current fiscal framework has been incapable to contain debt levels. Looking ahead, the domestic financing share of gross public debt is likely to decline as shallower domestic financial markets as a result of the pension fund withdrawals will require a stronger recourse to foreign financing.

Figure 1.15. The debt outlook has deteriorated, but is still better than in other EMEs



Source: Ministry of Finance; IMF, World Economic Outlook database; BIS.

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Higher debt, the strong recovery and high inflation now justify the planned substantial consolidation of fiscal policy over the next few years. Stronger than expected revenues in 2022 are helping to move in this direction. Current fiscal plans, in line with the fiscal rule, expect headline deficits of 0.1% of GDP in 2022 and 2.6% in 2023 when adjusted for OECD growth projections (Figure 1.13). In the short term, this will be achieved through a reduction in spending, as most transitory pandemic-related support programmes are being phased out. This implies a strong spending reduction close to 7.5% of GDP between 2021 and 2022. In the medium-term, the fiscal deficit is meant to narrow to 0.3% of GDP by 2026. The government also replenished the sovereign wealth funds by around 2% of GDP in the first semester of 2022.

Beyond 2023, the most salient feature of current fiscal plans is the mobilisation of additional tax revenues, spelled out through a wide-ranging tax reform presented in June 2022. These additional revenues are expected to come from higher personal income tax rates, especially in the upper brackets and from capital income, the introduction of a wealth tax, a higher tax burden on the mining sector and the reduction of tax exemptions in several areas, in combination with plans to improve tax enforcement. Legislated in 2022, these changes will affect the 2023 tax base, with most of the additional tax revenues being collected as of 2024. Over the medium term, the authorities expect an additional 4% of GDP in public revenues as a result of the reform.

The case for raising additional tax revenues appears strong given Chile's low tax intake on one hand, and the significant legitimate spending needs in several areas. While higher taxes may give rise to distortions that could weigh on economic growth, the overall effect of a fiscal reform package can be significantly more favourable if the additional revenues are used to finance expenditures that enhance growth and equal opportunities. Improvements in social protection and public services, as advocated in this Survey, would fall into that category. Such expenditures could include a more generous guaranteed minimum pension that would improve pension coverage and allow to strengthen the incentives for formal job creation, fighting poverty through better social transfers, investments in education and health. Moreover, additional investment in research and development could spur innovation and productivity. Raising an additional 4% of GDP in public revenues over time would be sufficient to finance the fiscal costs of recommendations made in this Survey (Table 1.3). This gradual process should be accompanied by regular impact evaluations.

Table 1.3. Medium-term fiscal impact of recommendations in this Survey

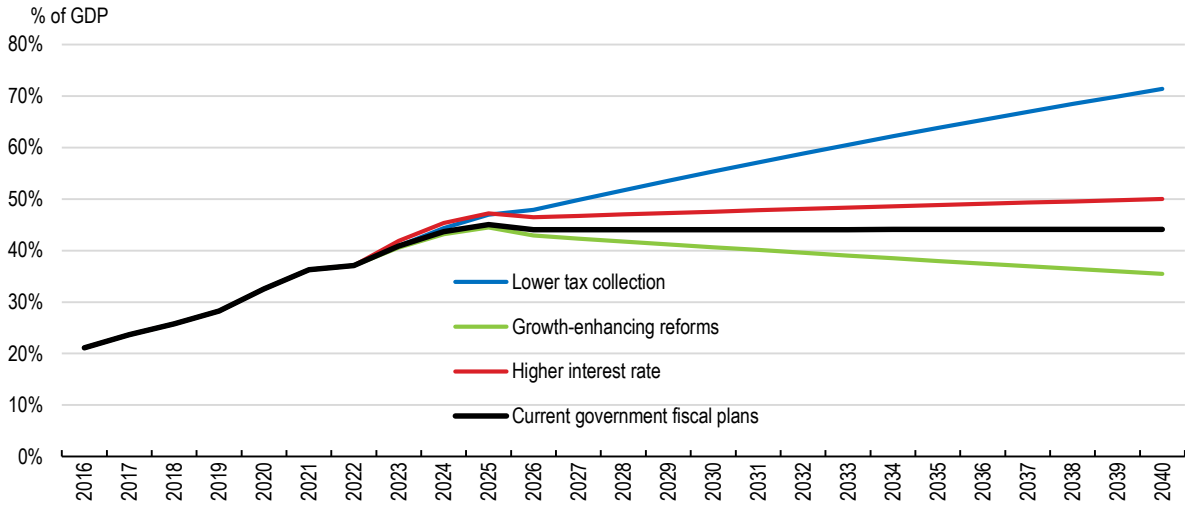
Recommendation	Estimated annual impact on fiscal balance
Mobilise additional tax revenues, including from personal income taxes, property taxes and improvements in tax administration.	4.0% of GDP (fully achieved by 2026)
Increase in the guaranteed minimum pension (PGU) to CL 250,000.	0.7% of GDP
Create a single guaranteed minimum-income scheme to eradicate poverty.	0.7% of GDP
Improve universal access to quality healthcare services through a single national health fund.	0.8% of GDP
Expand early childhood education and improve the remuneration of teachers, particularly at the entry level.	0.5% of GDP
Expand support for research, development and innovation	0.3% of GDP
Resulting change in fiscal balance	+1.0 % of GDP

Source: OECD estimates.

Based on these assumptions and including the expected fiscal costs associated with population ageing, gross public debt of the central government is projected to stabilise at 44% of GDP over the next two decades, almost 8 percentage points above 2021 levels, but in line with current practice in many emerging market economies (Figure 1.16, black line). This baseline scenario, however, is surrounded by significant risks. If currently planned ambitious tax reform were to raise only half the projected revenue increase by 2026 while maintaining spending plans, then gross public debt would be on an explosive path exceeding 71% of GDP by 2040 (Figure 1.16, blue line). Higher interest rates, possibly related to developments on global financial markets and shallower domestic financial markets, would also lead to a higher debt trajectory, though with a near-convergence of debt around 50% of GDP (Figure 1.16, red line). Finally, the package of growth-enhancing structural reforms described in Figure 1.3 would raise growth and hence reduce the debt-to-GDP ratio visibly, with a continuous decline in public debt that would reach 35% of GDP in 2040 (Figure 1.16, green line).

Figure 1.16. Public debt has risen

Scenarios for the trajectory of gross public debt



Note: The current government fiscal plans scenario assumes GDP growth as in Table 1.1 and 2.2% thereafter. Additional annual tax revenues of 4% of GDP are phased in between 2024 and 2026. Public expenditures consider the sum of committed expenditures as per DIPRES (2022) and additional expenditures announced in 2022. The lower tax collection scenario assumes that only 2% of GDP can be raised in additional tax revenues while maintaining spending plans. The higher interest rate scenario assumes an additional 0.6 percentage points for the implicit interest rate on gross public debt. Finally, the higher growth scenario assumes long-term growth of 3% in 2024-2026 and 2.7% as of 2027, as in DIPRES (2022).

Source: OECD calculations based on (DIPRES, 2022[11]).

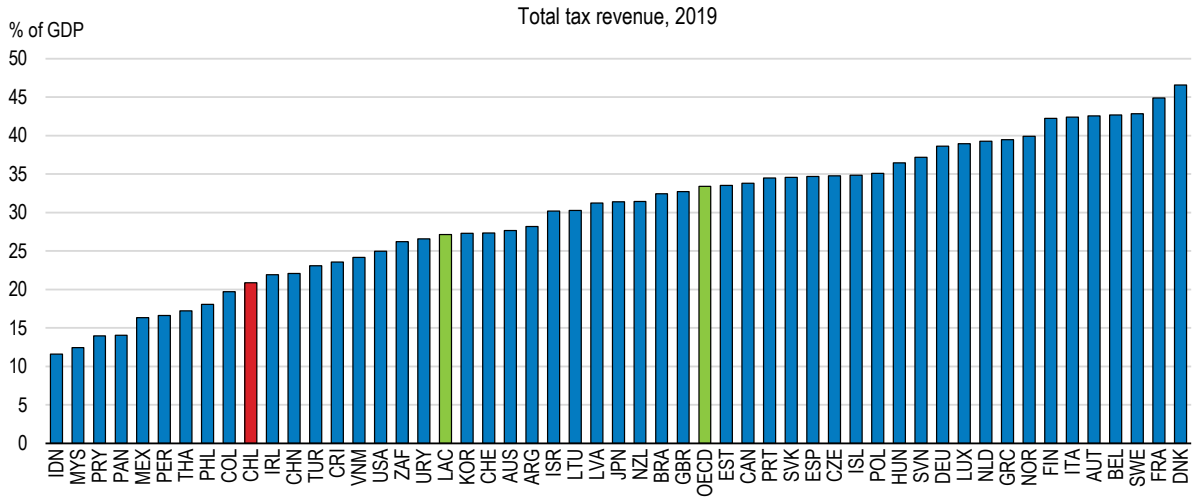
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Raising additional tax revenues through a structural tax reform

The recently presented tax reform would bring Chile's tax intake closer to the Latin American average, which is still some 7 percentage points of GDP below the OECD average. Chile's tax-to-GDP ratio is among the lowest in the OECD (Figure 1.17). This finding holds even when comparing Chile to OECD countries like Australia, Canada, Ireland and New Zealand when they had a similar income level to Chile, when including mandatory contributions to pension or health funds managed by the private sector for all countries where these are relevant (OECD, 2022[12]). The current tax intake of 21% of GDP is insufficient for achieving sizeable improvements in social protection and public services such as health and education, and mobilising additional resources is key for achieving more inclusive growth in the future.

Tax revenues in Chile are concentrated in value-added tax and corporate income tax, while higher-income OECD countries depend more on revenues from personal income taxes and social security contributions (Figure 1.18). When mandatory contributions to private sector pension funds are included in social security contributions, their share of tax revenues in Chile is not that dissimilar to the OECD average, but the personal income tax burden on individuals is much lower in Chile (OECD, 2022[12]). In addition, Chile's personal income taxes also have a limited distributive impact. While in OECD countries personal income taxes and social security contributions together reduce inequalities in market incomes by around 25%, inequalities are reduced by only 5% in Chile (Causa and Hermansen, 2017[13]).

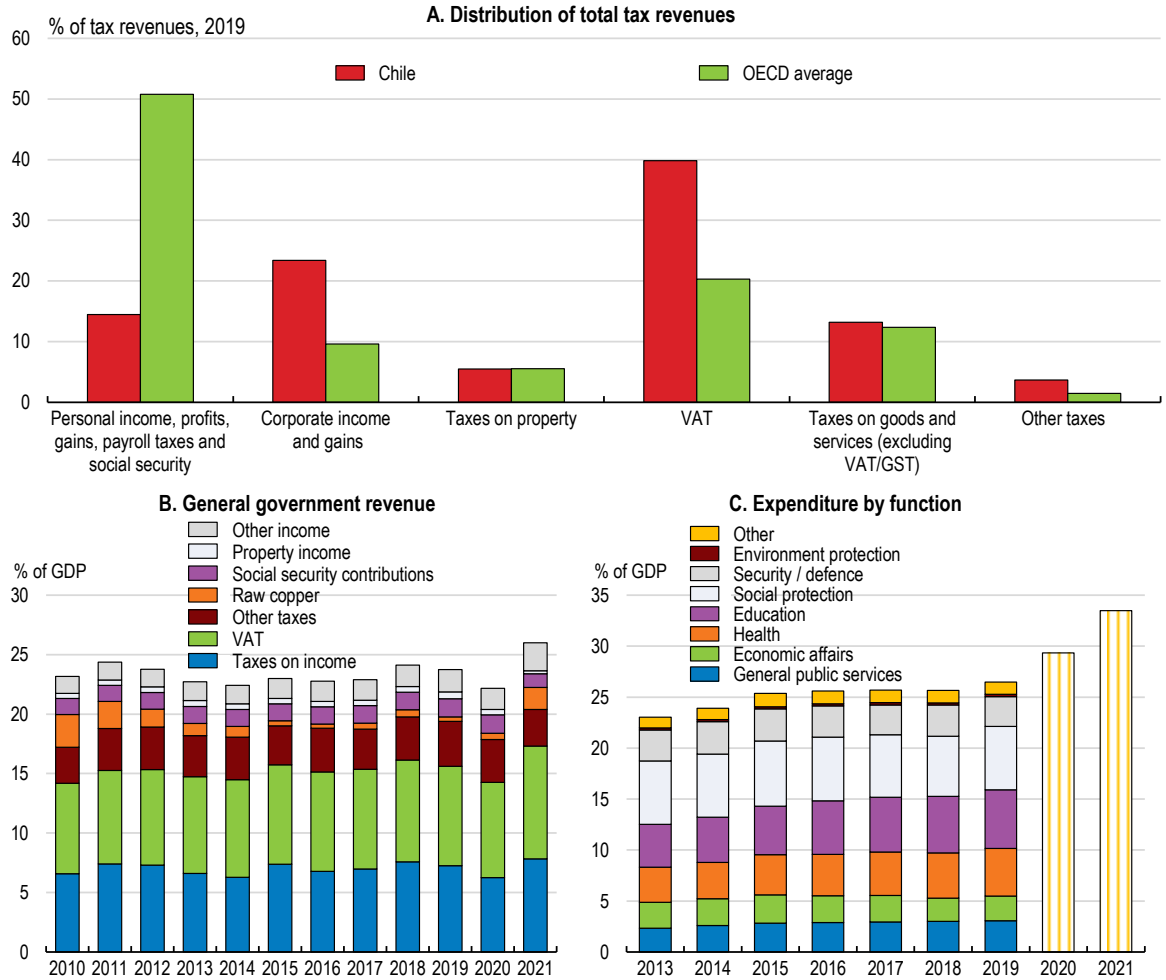
Figure 1.17. Tax revenues are low



Note: LAC is a simple average of ARG, BRA, CHL, COL, CRI, MEX, PER.
Source: OECD, Global tax revenue database.

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Figure 1.18. Tax revenue composition



Note: Tax revenue includes net receipts for all levels of government.
Source OECD Revenue Statistics database, Central Bank of Chile; OECD, SNA database.

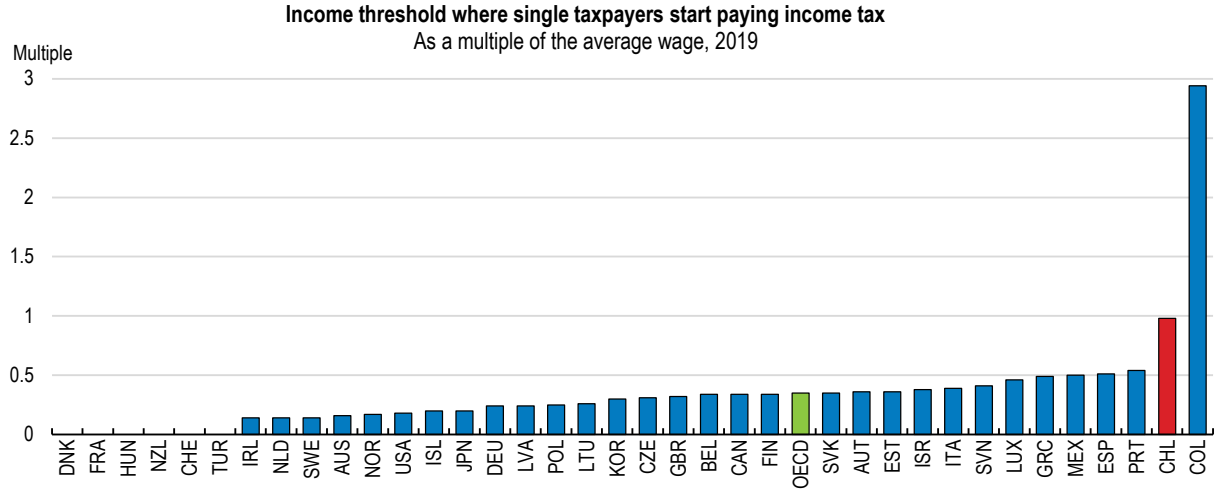
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The current tax reform plan that has been submitted to Congress envisages higher tax revenues from income and wealth on the order of 1.6% of GDP (DIPRES, 2022[11]). The draft includes introducing more progressivity into personal income taxes by raising rates in the higher tax brackets as of an annual income of USD 48,000 (Marcel, 2022[14]). Marginal tax rates will increase by 3-5 percentage points. The current top marginal rate of 40% is set to rise to 43%, almost identical to the current OECD average of 42.6 (OECD, 2021[15]).

The authorities also plan the introduction of a net wealth tax for individuals with global net assets exceeding USD 5 million, which would affect 6300 taxpayers in Chile. While there may be some merit to the motivation of correcting for weaknesses in taxing capital and labour income adequately in the past, difficulties in the valuation of assets and the risk of capital flight may limit the potential revenues of a wealth tax. The authorities are anticipating these challenges, and addressing them through a simplified valuation method, while revenue projections that consider a reduction of the tax base of 6% for every percentage point of the wealth tax. Eleven OECD countries currently use a wealth tax, raising an average of 0.3% of GDP (OECD, 2021[16]). Chile aims to raise 0.5% of GDP from the new net wealth tax, similar to Norway, and has opted for a simplified valuation of assets and liabilities to establish clear rules for taxpayers. There may also be scope for further revenues from taxes on immovable property, which raise 1.2% in the average OECD country, compared to 0.8% in Chile. Relative to other taxes, property taxes tend to have relatively benign growth effects (Arnold et al., 2011[17]).

An additional reason for the narrow personal income tax base is the high basic deduction, which implies that only around 25% of the population effectively pay the personal income tax (Figure 1.19). Relative to the average wage, this basic deduction is the second-highest in the OECD. Aligning only the basic deduction with the average OECD practice of single taxpayers starting to effectively pay personal income taxes at 35% of average wages, would lead to potential additional revenues of up to 0.8% of GDP (Brys et al., 2020[18]). Bringing more people into the personal income tax system, including with a low starting rate such as the 4% rate currently applied, would also help with the delivery of targeted benefits and the expansion of administrative tax data used in this process. The political economy of a gradual adjustment in this direction may not be easy, and would probably be facilitated if preceded by higher taxes on very high incomes as currently planned, some visible improvements in the quality of public services, or by lower social security contributions for low-income earners, as discussed in Chapter 2. Adjustments of the basic deduction are not part of the current tax reform proposal, but could be envisaged in the future.

Figure 1.19. Only few people pay personal income taxes



Source: OECD, Taxing Wages 2021, available at https://doi.org/10.1787/83a87978-en.

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The high basic deduction also has implications for the distributional impact of personal income tax deductions, such as the proposed possibility for tenants to deduct rent paid from their taxable income up to USD 450 per month, or for families with young children to deduce childcare costs up to USD 550 per month. As this tax expenditure only affects those that pay personal income taxes, which are the top 25% of the income distribution, its distributional effects would likely be regressive and the 75% of Chileans with incomes below the basic deductions would not see its benefits. By contrast, a long-standing tax exemption of landlords' rental income is set to be abolished by the tax reform proposal. This measure is expected to have a strongly progressive distributional impact.

Another reason for low personal income tax revenues is Chile's partially integrated income tax system which grants a partial shareholder-level dividend tax credit for corporate taxes paid at the company level. While an integrated tax system is meant to avoid the double taxation of corporate income, and is applied in Australia, Canada, Mexico and New Zealand, there is a perception in Chile that it has led to a low effective tax burden on capital incomes. Evidence suggests that taxpayers in the top 0.1% of the income distribution face a lower tax burden than people below the 90th percentile when considering corporate tax, personal income tax and value added tax (Ministerio de Hacienda, 2022[19]). The current proposal would establish a semi-dual income tax, where capital income and capital gains are taxed at a flat rate of 22% for those with annual incomes above USD 96,000, while those with lower incomes would pay their effective personal income tax on these revenue sources. The total tax burden on dividends, including the corporate tax paid at the company level, would remain below 43% with this new arrangement, close to the OECD median and the top marginal personal income tax rate.

For corporate taxpayers, the tax reform reduces the statutory rate from 27% to 25% while establishing a new 2% development surcharge from which productivity-enhancing investments into research and development or high-technology manufacturing or services inputs can be deducted entirely until none of this surcharge is due. This is a welcome change that is likely to spur productive investment. In addition, the ceilings of the R&D tax credit have been raised significantly (see section on productivity). The motivation behind these measures is to promote technology upgrading, and Chile's Productivity Commission, created in 2015, will participate in the definition of deductible expenses.

Taxes and royalties on large mining companies, particular in the copper sector, appear somewhat lower than in competitor economies, with an estimated effective tax rate on the sector in the range of 29%-40% (Caro and Hurtado, 2022[20]; Castillo and Valverde, 2021[21]; Davis and Smith, 2020[22]; Ostensson, Parsons and Dodd, 2014[23]; Jorratt, 2021[24]). The current tax reform proposal aims to raise an additional 0.5% of GDP in tax revenues from the sector, without breaking any existing contracts and respecting necessary delays. For holding companies, defined as those generating more than half their revenues from dividends, interests and rents, a new withholding tax of 1.8% will be applied.

Corrective taxes that are meant to change consumer behaviour like fuel or carbon taxes could also be an additional source of revenues in the medium run, even if in many cases their principal motivation is to change relative prices rather than raising revenues. Chile's carbon tax of USD 5 per ton of CO_2 is low in international comparison (see section on green growth). In addition, diesel fuel taxes are only a quarter of the tax burden on gasoline, which lacks an economic rationale (Harding, 2014[25]), and trucking companies as major diesel consumers are largely exempt from diesel taxes. The potential revenue impact of aligning the effective tax burden on diesel with petrol has been estimated at 0.5 percent of GDP (Brys et al., 2020[18]). Plans to raise corrective taxes are not part of the current tax reform proposal, but are being elaborated with a view towards presenting a draft law in the second half of 2022.

Fighting tax evasion is an attractive way to raise additional revenues and enhance tax fairness, but further headways would likely require investments in tax administration. Chile's tax authorities estimate lost VAT revenues from evasion at around 20% of VAT revenues, or 2% of GDP (SII, 2018[26]). While this is a large number, it is unlikely that all of this lost revenue could ever be recovered, but past efforts to enhance monitoring and audits have borne fruits, and could be one avenue to build on (Pomeranz, 2015[27]). The

scope for reducing income tax evasion is hard to assess, although improvements in the international exchange of information with more tax jurisdictions may help in the future. The current tax reform proposal intends to enhance transparency and compliance by creating a register of ultimate beneficial owners of companies, as has become common practice among OECD countries, in addition to changes to bank secrecy rules and the establishment of an anonymous whistle-blower statute for tax-related matters. In total, the authorities expect anti-evasion measures to generate additional revenues of 1.6% of GDP.

The current tax reform proposal contains many elements that go into the right direction of raising additional revenues in a progressive manner while promoting productivity and environmental sustainability. While some residual uncertainty will always remain, the authorities' goal of mobilising an additional 4 percentage points of GDP over 4 years is ambitious but certainly not out of reach, if sufficient political support can be garnered. Ideally, such a large tax reform should be based on a broad consensus to ensure continuity. Since 2010, subsequent governments have implemented a series of tax reforms, often undoing the changes made by their predecessors, and this has created policy uncertainty for investors.

The additional tax intake could be combined with measures to strengthen public spending efficiency, including by unifying fragmented income support schemes and re-organising innovation and research support programmes, for example. Estimates suggest that overall savings from improving the technical efficiency in public transfers, procurement and staff costs could amount to as much as 1.8% of GDP (Izquierdo, Pessino and Vuletin, 2018[28]). Even if these spending inefficiencies are one of the lowest in Latin America, realising some of the potential savings could complement new tax measures.

Strengthening the fiscal framework

Chile's solid fiscal framework rests on a structural fiscal balance rule established in 2001, with the copper price as one key ingredient. Both short and medium-term fiscal plans are published regularly and compliance with the fiscal rule is monitored by a recently established independent fiscal council. This strong framework has allowed Chile to build ample fiscal space during periods of high commodity prices. At the same time, Covid-19 and the resulting exceptional spending needs suggest that the current fiscal rule could be enhanced through a well-defined escape clause that specifies emergency reasons and modalities for departing from the rule, but also a clearer path for returning to it (CFA, 2021[29]). A recent draft bill aims at clarifying this issue, which would be a clear improvement in the fiscal framework.

But even before the pandemic, the current structural fiscal balance rule has not proven effective in reining in gross public debt, which has risen from 8.6% of GDP in 2010 to 28.3% in 2019, and then to 36.3% in 2021. Net debt has seen similar increases. This suggests that more could be done to contain future debt build-up. A recent addition to the fiscal framework has been the definition of a prudent debt ceiling of 45% of GDP, and recent government reports on the state of public finances have included a calculation of fiscal targets that would ensure compliance with this ceiling. A recent draft bill is meant to formalise this by adding an explicit debt anchor to the current fiscal rule, which would be a welcome improvement of the current fiscal framework. Pending implementation, the resulting dual fiscal rule would then be enshrined in law in the same way as the current rule.

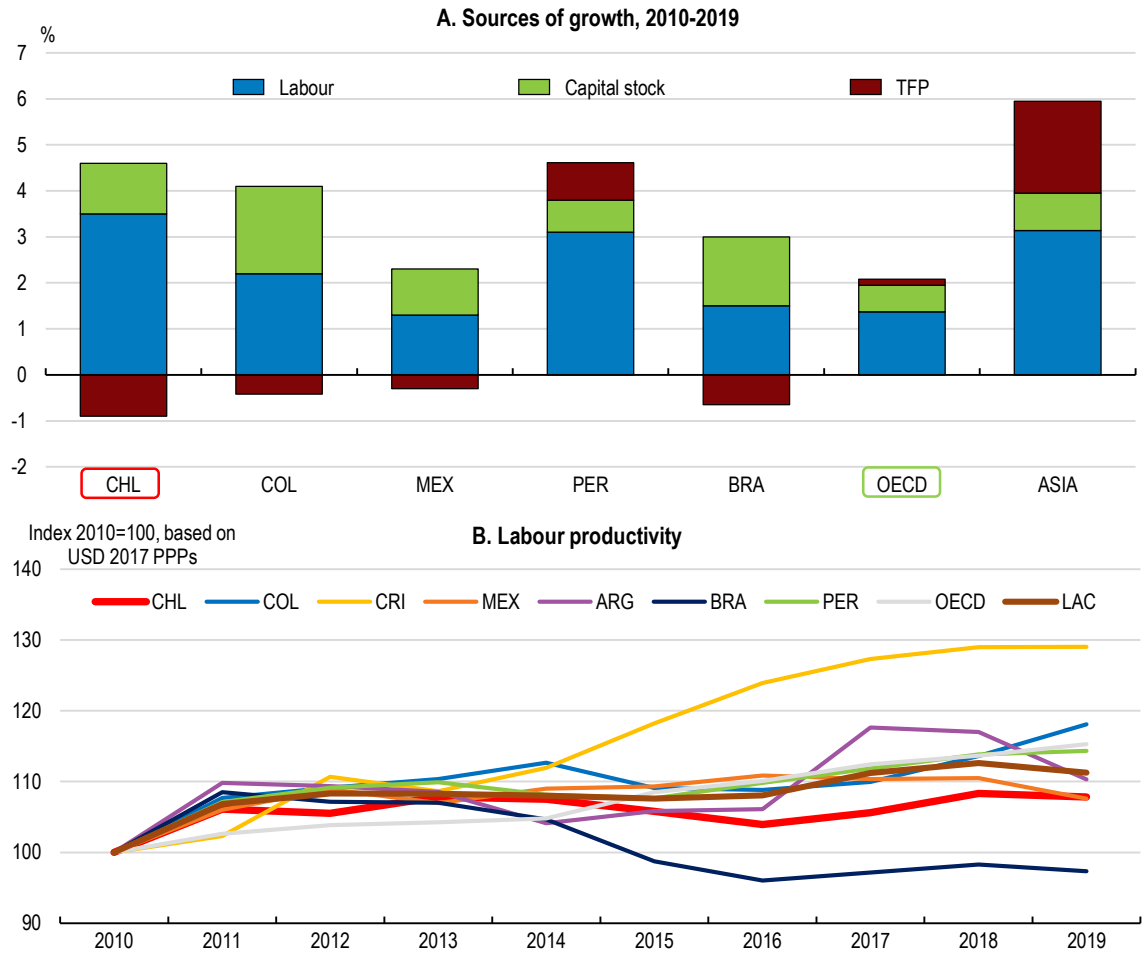
Boosting productivity requires stronger competition and internationalisation

Over the last decade, Chile's total factor productivity has fallen and subtracted from economic growth (Figure 1.20, Panel A). This has widened Chile's productivity gap and GDP per capita gap relative to both advanced economies and fast-growing Asian economies, in line with developments in some other LAC countries (Figure 1.20, Panel B). The contribution of investment to growth, by contrast, has been fairly in line with other economies.

Boosting productivity has become a key priority for Chile. Weak productivity performance has severe implications for future improvements in material living standards, given that the favourable demographic developments of the past are turning around and will soon become a drag on growth (Figure 1.2). This

gives productivity growth a key role for sustained economic development, including the ability to redistribute income and improve the lives of those in need (World Bank, 2020[30]; UNDP, 2021[31]; OECD, 2015[32]). Without policies that boost productivity, the scope for further economic and social progress and to finance the policies described in Chapter 2 will be severely limited.

Figure 1.20. Productivity has been a drag on growth and has fallen behind regional peers



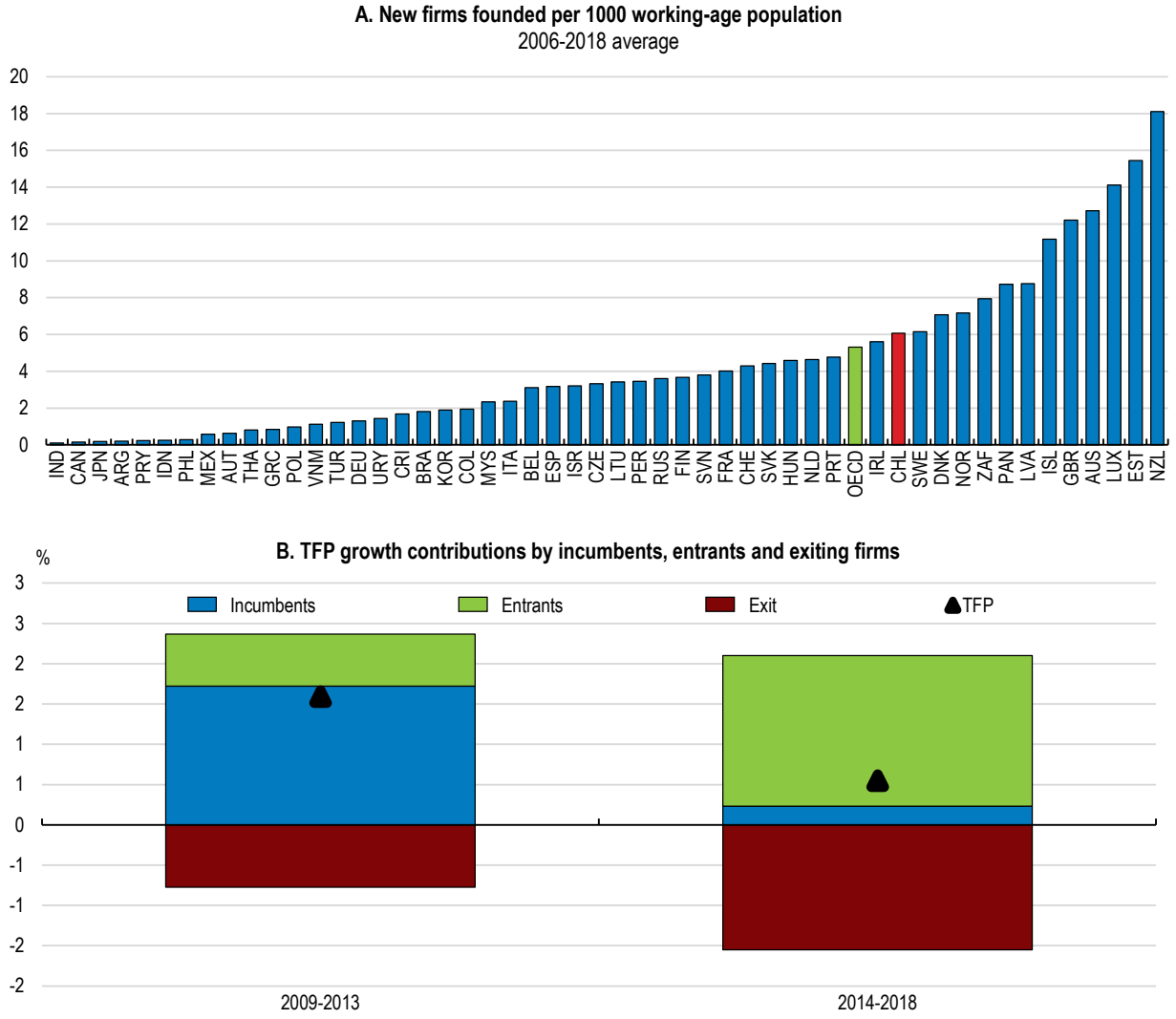
Note: ASIA, LAC and OECD are GDP-weighted averages for countries with available data.
Source: Conference Board; Feenstra, Robert C., Robert Inklaar and Marcel P. Timmer (2015), "The Next Generation of the Penn World Table" American Economic Review, 105(10), 3150-3182, available for download at www.ggdc.net/pwt.

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A closer look at productivity developments across sectors reveals that mining, the largest sector of the economy, at 12.5% of value added, has been a drag on productivity growth for 20 years, largely as a result of a deterioration in ore grade since the early 2000s (CNEP, 2017[33]; De la Huerta and Luttini, 2018[34]). Falling productivity in extractive resource industries is a common feature beyond Chile, potentially aggravated by a deteriorating environmental footprint. The strong specialisation of the economy in mining industries also leaves the economy vulnerable to price volatility and previous OECD Economic Surveys have identified diversifying the economy as fundamental challenge for sustaining continuous long-term growth (OECD, 2018[35]). Comparing firms of different sizes, small and medium firms as a group have turned from declining productivity to positive growth, while the productivity of large firms has been trending down. In part, this may reflect the weight of mining firms among large firms.

Entry, exit and differential growth rates among incumbent firms, have also contributed positively to productivity growth. Entrepreneurship has been vibrant in Chile, as evidenced by higher business entry than in the average OECD country (Figure 1.21, Panel A). Moreover, the market entry of new firms has increasingly added to aggregate productivity growth in recent years (Figure 1.21, Panel B).

Figure 1.21. Vibrant entry of new firms has been sustaining productivity growth



Source: World Bank Entrepreneurship Survey and database, and Central Bank of Chile.

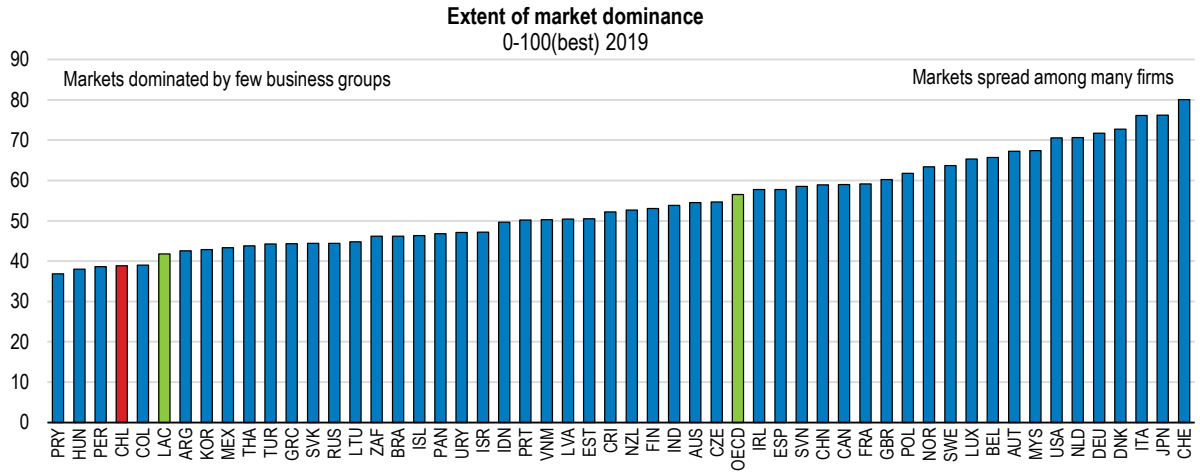
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Additional policy action can help to support these encouraging trends that have emerged. Boosting innovation and investment into research and development and technological upgrading is a key priority. The innovative potential of new entrants and the positive role of new firm entry for productivity point to the relevance of keeping markets open and ensuring vibrant competition. A new partial VAT exemption for start-ups in their first year of operation, part of the current tax reform proposal, is likely to support entrepreneurship at a fairly low fiscal cost of 0.004% of GDP (DIPRES, 2022[11]). Strengthening participation in international trade and attracting foreign direct investment are also avenues for improving technologies and achieving stronger productivity growth. Policies to support digitalisation have been discussed in detail in Chapter 2 of the 2021 Economic Survey of Chile.

Strengthening competition through lower administrative burdens

Several indicators point to scope for strengthening competitive pressures among Chilean firms. Perceptions of business executives suggest that several key markets are dominated by relatively few players, making Chile the 39th most concentrated economy out of 141 (WEF, 2019[36]) (Figure 1.22). High productivity growth can be related to higher levels of competition, as competition provides the necessary incentives for existing firms to innovate and adopt better technologies (Holmes and Schmitz, 2010[37]; Costa Junior and Garcia-Cintado, 2021[38]; Vianna and Mollick, 2018[39]), while also supporting the reallocation of resources towards more productive firms, including new entrants (Decker et al., 2016[40]). But competition also matters for downstream firms that source from those sectors where competition is weak. This is particularly relevant for services inputs, where international tradability is often limited. International evidence suggests that access to cost-effective and innovative services inputs can play an important role for productivity in downstream sectors (Arnold, Javorcik and Mattoo, 2011[41]; Arnold et al., 2016[42]).

Figure 1.22. Competition is relatively weak

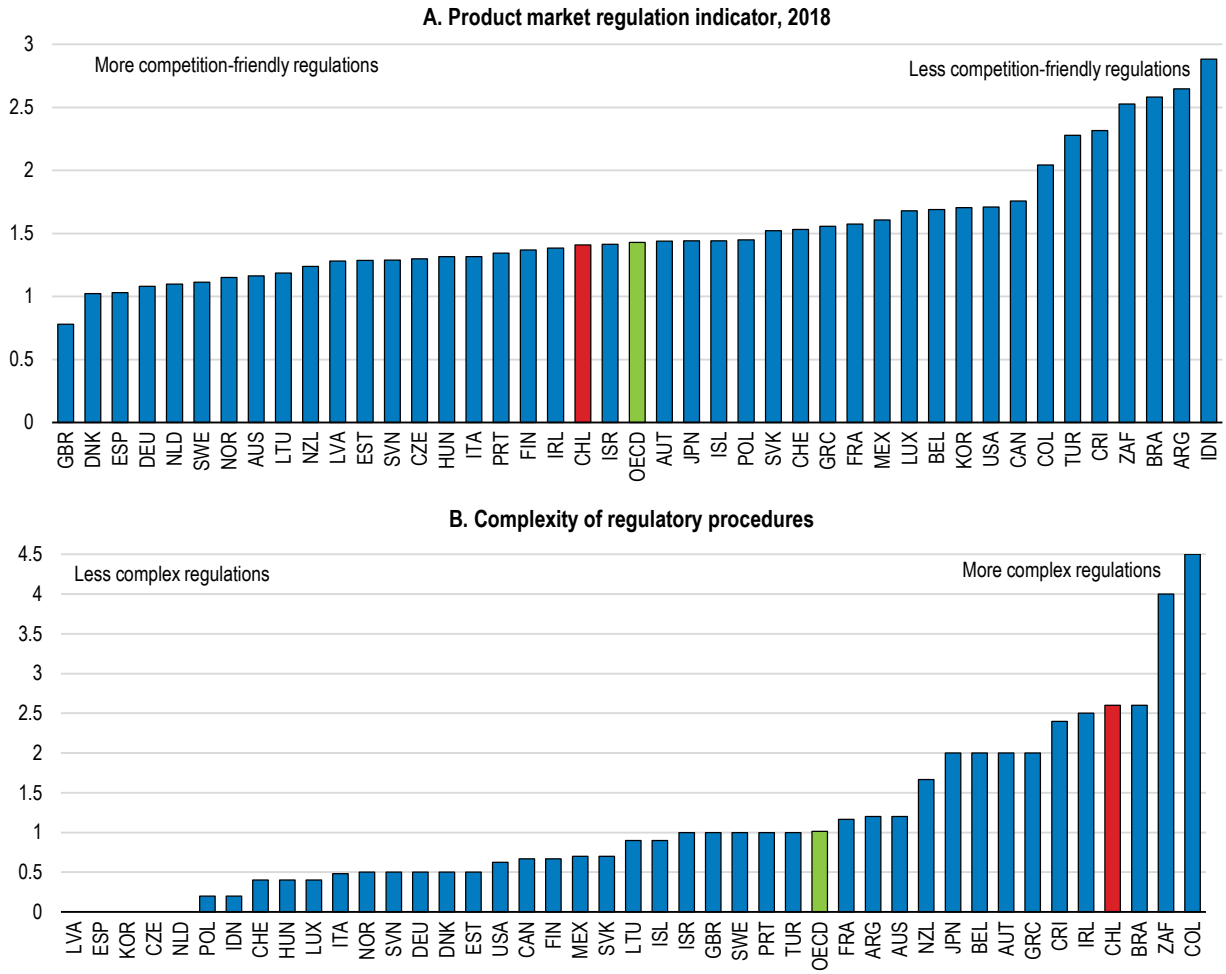


Source: World Economic Forum. The Global Competitiveness Index 4.0 2019 dataset, available at https://www.weforum.org/reports/how-to-end-a-decade-of-lost-productivity-growth.

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Chile's regulatory requirements on product markets are slightly less restrictive on average than those of the average OECD country (Figure 1.23). However, some specific sub-indicators reveal areas where Chile is significantly more restrictive than others. One area that stands out is the complexity of regulatory procedures.

Figure 1.23. Product market regulations compare well on average, but challenges remain

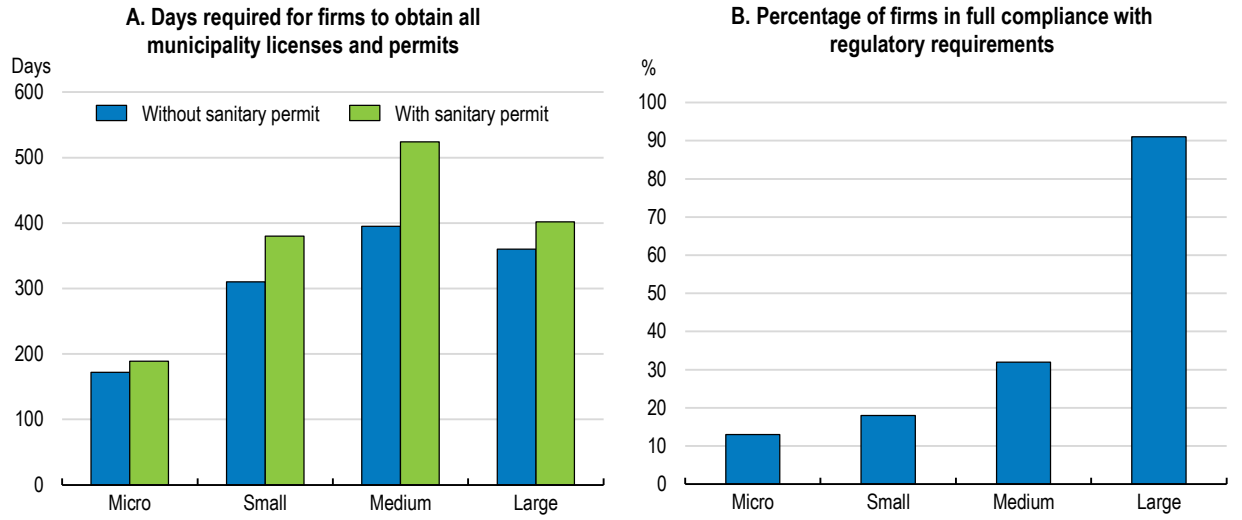


Source: OECD Product Market Regulation database 2018, available at http://oe.cd/pmr.

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While the last years have seen progress at the level of the central government, municipal licensing procedures continue to hamper entrepreneurship significantly. The time required to obtain all necessary municipal licenses can amount to up to 1.5 years (Figure 1.24, Panel A). This results in significant non-compliance with license requirements among small and medium enterprises, which weakens the rule of law, exposes these small new market entrants to judicial uncertainty and may deprive them of access to credit (Figure 1.24, Panel B). License requirements are often the same for small and large enterprises, so that the burden of compliance falls disproportionally on small firms given their lower capacity to deal with administrative burdens. Moreover, licenses and regulations are a particular hurdle for first-time entrepreneurs, and their simplification would there not only matter for productivity, but also for the challenges related to social inclusion and formalisation discussed in Chapter 2.

Figure 1.24. Municipal licenses are a significant burden on entrepreneurship



Note: Micro firms are defined by annual sales below 2.400 UF, small firms between 2.400 UF and 25.000 UF, medium size firms between 25.000 UF to 100.000 UF and large firms have annual sales above 100.000 UF. 1 UF=39 USD.
Source: Comisión Nacional de Evaluación y Productividad: Informe Anual de Productividad 2021, available at https://www.cnep.cl/wp-content/uploads/2022/01/Informe-Anual-de-Productividad-2021-1.pdf

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The central government can play an active role in reducing licensing burdens at the level of municipalities, many of which are not yet digitalised (CNEP, 2021[43]). In 2019, the government created a digital platform as a single point of contact to deal with 182 sectoral regulatory procedures for investment projects, including 9 municipal license requirements. A centralised internet portal for these municipal permits has been created, but almost half of municipalities are not yet integrated. Many of the more advanced municipalities have by now created their own portal where some other services are offered. In a similar vein, the authorities have started to roll out a digital platform for dealing commercial license applications at the municipal level in 2020. 26 municipalities are currently registered in this licensing module to process online applications, which is integrated into an online entrepreneur platform. Streamlining and unifying this complex universe of municipal licenses and portals into a true single window would significantly reduce the burden on entrepreneurs, investors, and citizens, as has been achieved in Portugal, for example. By raising transparency and reducing the scope for discrete decisions, this would also reduce the scope for corruption.

Additional regulatory complications arise whenever a firm wishes to enter a strategic sector. In these sectors, multiple agencies at the national, regional and local level are involved in the licensing process, with overlapping competencies in terms of content (CNEP, 2019[44]). The uncertainty rises further when the rules about the approval process not clearly defined, and discrete political decisions about the approval of an investment project, often at the very end of the administrative process, make regulatory outcomes less predictable. Defining clear rules would help to reduce this uncertainty.

This also applies to environmental licenses, which are subject to significant delays, uncertainties and litigation. Institutional safeguards against political influence are insufficient, due to a lack of effective protection mechanisms for professional assessment teams against political pressures (Chile Transparente, 2021[45]). The final approval decision of the Environmental Assessment System lies with a Committee of Ministers, rather than being guided by clear and transparent rules. The quality of the process and environmental protection could be boosted by improving the capacity of public institutions to obtain and review relevant information, as the current process is characterised by a heavy reliance on information provided by project owners (Chile Transparente, 2021[45]).

The complexity of Chile's regulations will require a comprehensive review of the stock of existing regulations and their competition impact. Many existing rules may have ceded to serve a legitimate public interest purpose, and where that purpose can be confirmed, digitalisation provides plenty of opportunities to reduce compliance costs. Such a review should include all levels of government and all ministries and institutions that issue regulations, but driven by a coordinating agency at the central level. One ultimate objective of such a comprehensive review would be a move towards a "zero-licensing" scheme wherever possible, following the successful example of Portugal in 2013 (OECD, 2014[46]). Under this scheme, license requirements in non-risk sectors were largely replaced by a simple prior notification to the authorities through electronic means, combined with reinforced ex-post inspections and sanctions for non-compliance.

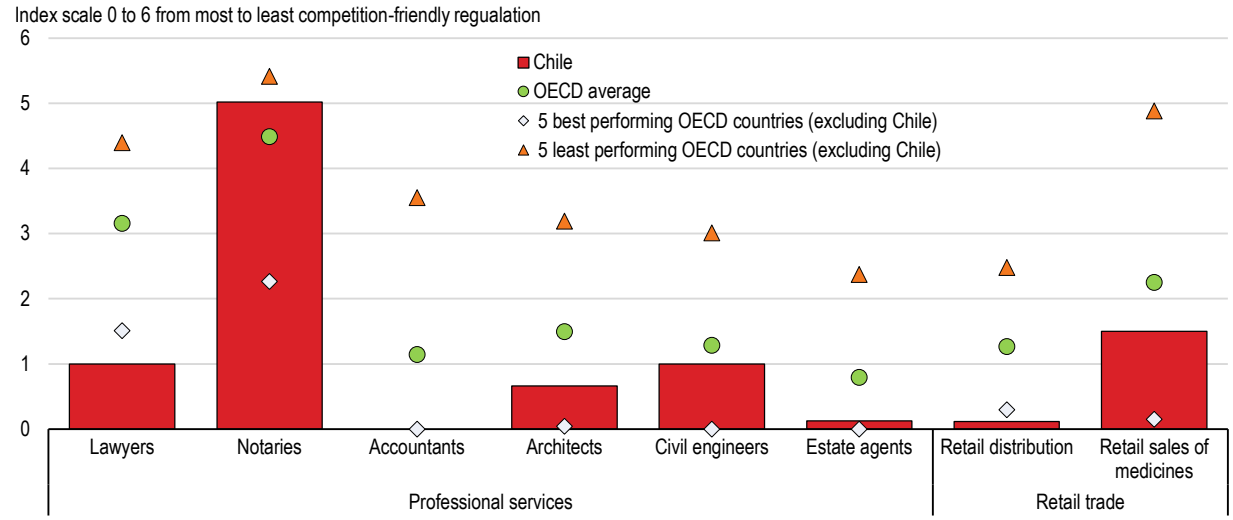
For new draft laws and regulations within the realm of 24 ministries, regulatory impact evaluations became mandatory in 2019. An evaluation one year later, however, showed only limited compliance with the evaluation requirement, at around 40% for laws and 12% for general decrees, which implement regulations. The rules were refined in 2022, but more efforts may be needed to ensure full compliance.

Collaboration between the public and private sector is being enhanced through sector-specific Executive Roundtables, following a successful experience in Peru. These are meant to identify and address obstacles to productivity growth in sectors such as construction, tourism, food and the creative industries. These roundtables involve regular meetings and interactions between private and public stakeholders, which allows them to identify problems and implement solutions, scaling them up quickly to the highest political level if necessary to ensure that solutions are delivered. Moreover, the solutions often involve regulatory changes in different areas of government.

Chile's competition policy framework has seen significant improvements over recent years, although with significant delay relative to other OECD countries. Merger control and criminal sanctions for cartels were only introduced in 2016, leaving a legacy of high concentration across wide parts of the economy. In line with OEC recommendations, the same 2016 law also strengthened the powers of the competition authority (*Fiscalía Nacional Económica*). In fulfilment of its competition advocacy role, the competition authority has been trying to address the legacy of high concentration by undertaking market studies of key sectors. These revealed significant need for action on competition in sectors such as prescription and non-prescription drugs, school books, public notaries, public procurement, annuities, gas and funeral services. These market studies, some of which have resulted in concrete legislative initiatives, are a highly valuable part of necessary efforts to take stock of competition weaknesses in product markets, but they should also result in changes to the law, which has so far not happened. The authority's current budget for these studies is insufficient for playing a stronger role in this process and should be augmented, as it currently only finances a staff of 5.

Professional services are particularly prone to barriers to competition imposed by sector regulations. Chile's regulations perform well in many of them, but one example of insufficient competition is the public notaries' profession (Figure 1.25). Currently notaries are needed for more than 200 procedures, both for the validation of signatures and the drafting and storage of legal documents. The sector is characterised by high entry barriers, supply restrictions and price regulations. Notaries require a law degree with 1 year of practice, face geographic restrictions on their area of exercise that effectively give them local monopolies and their number is fixed by decree. Signature validation in only 17 procedures generates 85% of notaries' revenues, but none of these require any judicial knowledge (FNE, 2018[47]). Moreover, regulated price ceilings for certain services are regularly ignored. This implies a significant cost for businesses, particularly when combined with a complex regulatory and license framework. A 2018 draft law aimed to mondernise the notary system and reduce the mandatory recourse to notaries and a 2020 draft law aimed to exempt 11 common procedures from the need to notarise signatures, but both projects have not advanced in Congress. Extending the use of electronic signatures may also reduce the costs of contracting and administrative procedures, but a 2012 draft law to that regard has not yet advanced in Congress.

Figure 1.25. Regulation restricts competition in the notaries profession



Source: OECD Product Market Regulation database 2018, available at http://oe.cd/pmr.

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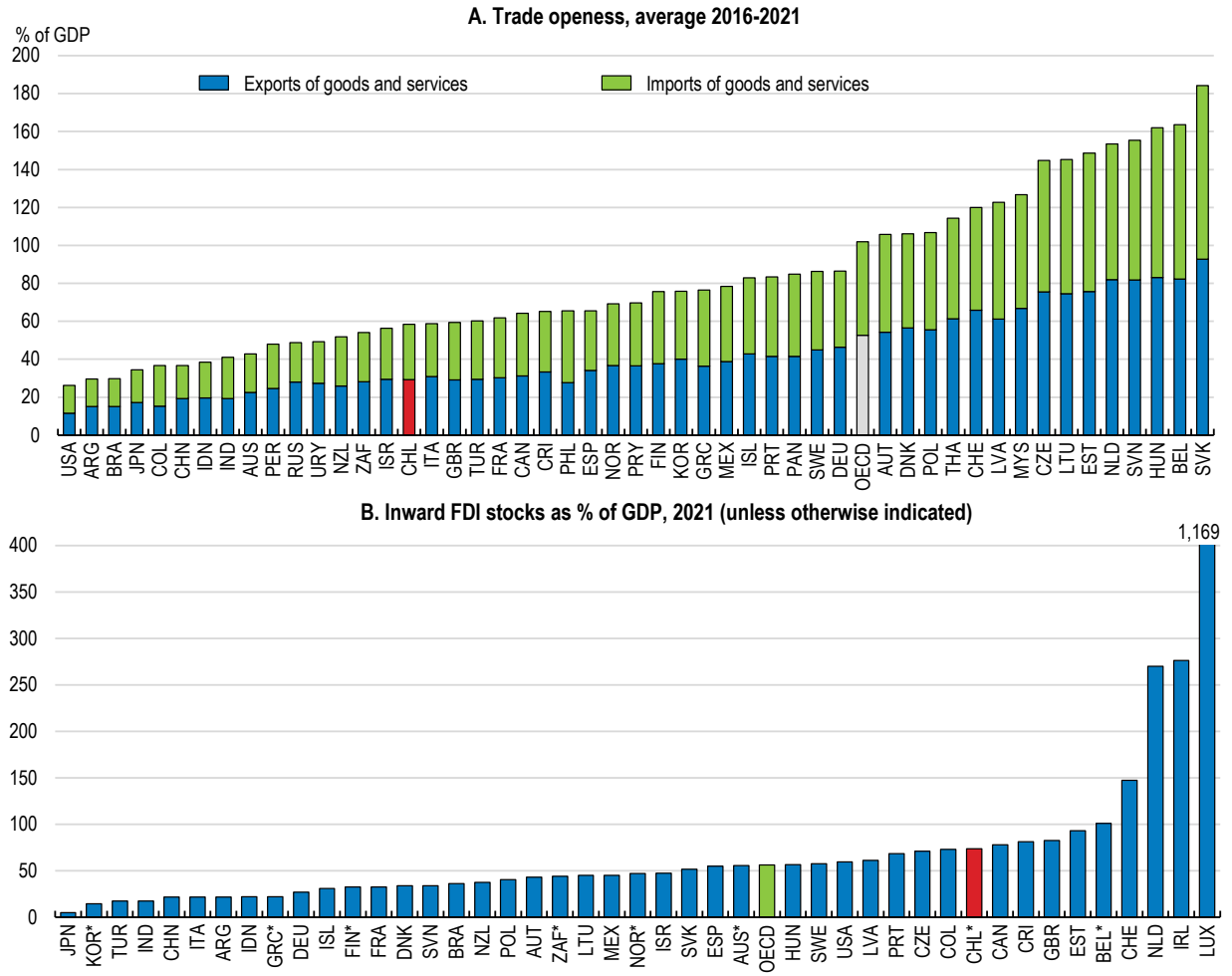
Harnessing international trade and investment for stronger productivity gains

Not only domestic, but also external competitors determine the strength of competitive pressures. Chile has actively and successfully sought to harness international trade and foreign direct investment (FDI) for domestic growth and employment creation (Novik and Nazal, 2020[48]). Multi-lateral tariffs are low and further reduced by an extensive network of 29 trade agreements with 65 markets. Some of these include modern provisions that aim to improve the social and sustainability impact, such as provisions about labour or environmental standards, or responsible business conduct. Chile's participation in international trade is mid-range among OECD countries, which may be related to its relative geographic remoteness relative to large markets (Figure 1.26, Panel A).

Chile's export structure is significantly shaped by mining exports, especially copper (Figure 1.27). The reliance on natural resource intensive sectors has limited diversification of exports in terms of goods, firms and destinations, as pointed out in the 2018 Economic Survey of Chile (OECD, 2018[35]). At the same time, Chile will have an important role in the global energy transition due to its abundance in key natural resources such as lithium and its favourable conditions for producing green hydrogen (see section on green growth).

Further diversification of exports, and of production structures, remains a major outstanding challenge, even if some progress has been made in developing comparative advantages in other sectors including wine, salmon, forestry and fruit production. Manufacturing exports now account for almost a third of total goods and services exports. Still, there is ample room for further efforts to diversify export and production structures, including with respect to participation in global value chains (GVCs). Chile's sizeable forward participation in GVCs is largely the result of exporting primary and intermediate products that feed into other countries' exports. By contrast, backward participation, measured by the share of foreign inputs in gross exports, is rather small, in line with its market size and distance from manufacturing hubs (OECD, 2022[49]).

Figure 1.26. Chile's trade participation is mid-range, but it attracts sizeable FDI flows

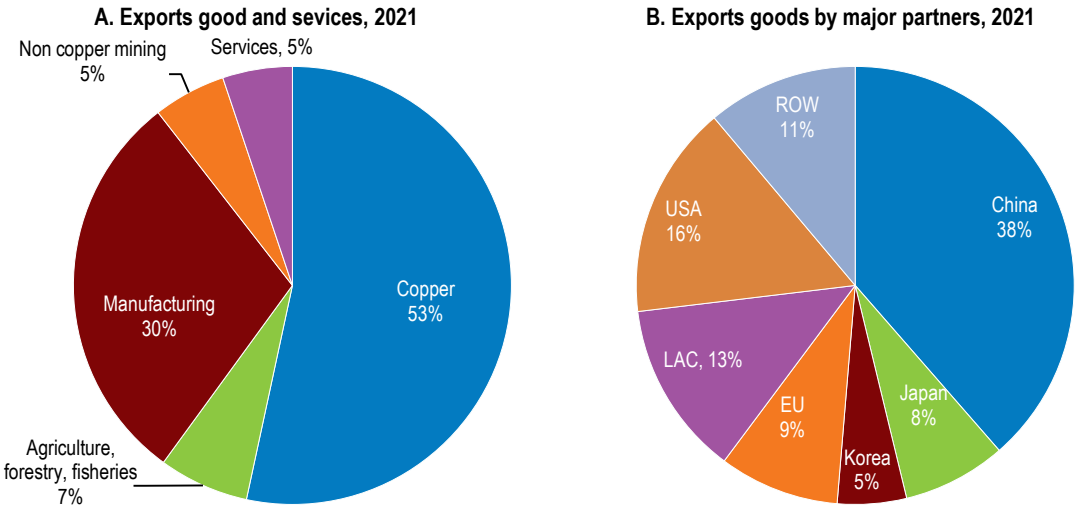


Note: In Panel B, countries marked by an asterisk refer to 2020.
Source: OECD Economic Outlook database, OECD (2021), FDI stocks (indicator). doi:10.1787/80eca1f9-en.

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Inward FDI stocks are higher than in the average OECD economy or regional peers (Figure 1.26, Panel B), even if inflows have declined over the last 10 years, in line with developments in many countries (OECD, 2022[49]). 40% of FDI stocks are concentrated in the mining sector, mainly in copper mining, while finance and energy, particularly renewables, have also become increasingly attractive for foreign investors. Attracting more FDI in the production of green hydrogen could help to develop that sector (see section on green growth). Foreign companies play a key role for exports of both goods and services, but they are also significantly involved in the creation of human capital and integrated into domestic value chains, through their purchases from domestic suppliers and their sales to other Chilean companies, in particular SMEs (OECD, 2022[49]). Chile does not currently have a mechanism to review inbound foreign investment with the goal of safeguarding national security goals. OECD Council Guidance from May 2009 recommends members adopt such an FDI review mechanism "based on principles of non-discrimination, transparency, predictability, and accountability" to safeguard national security. Chile should continue to explore adoption of such an investment review mechanism, while preserving its open investment climate.

Figure 1.27. Mining continues to play a significant role for Chile's exports



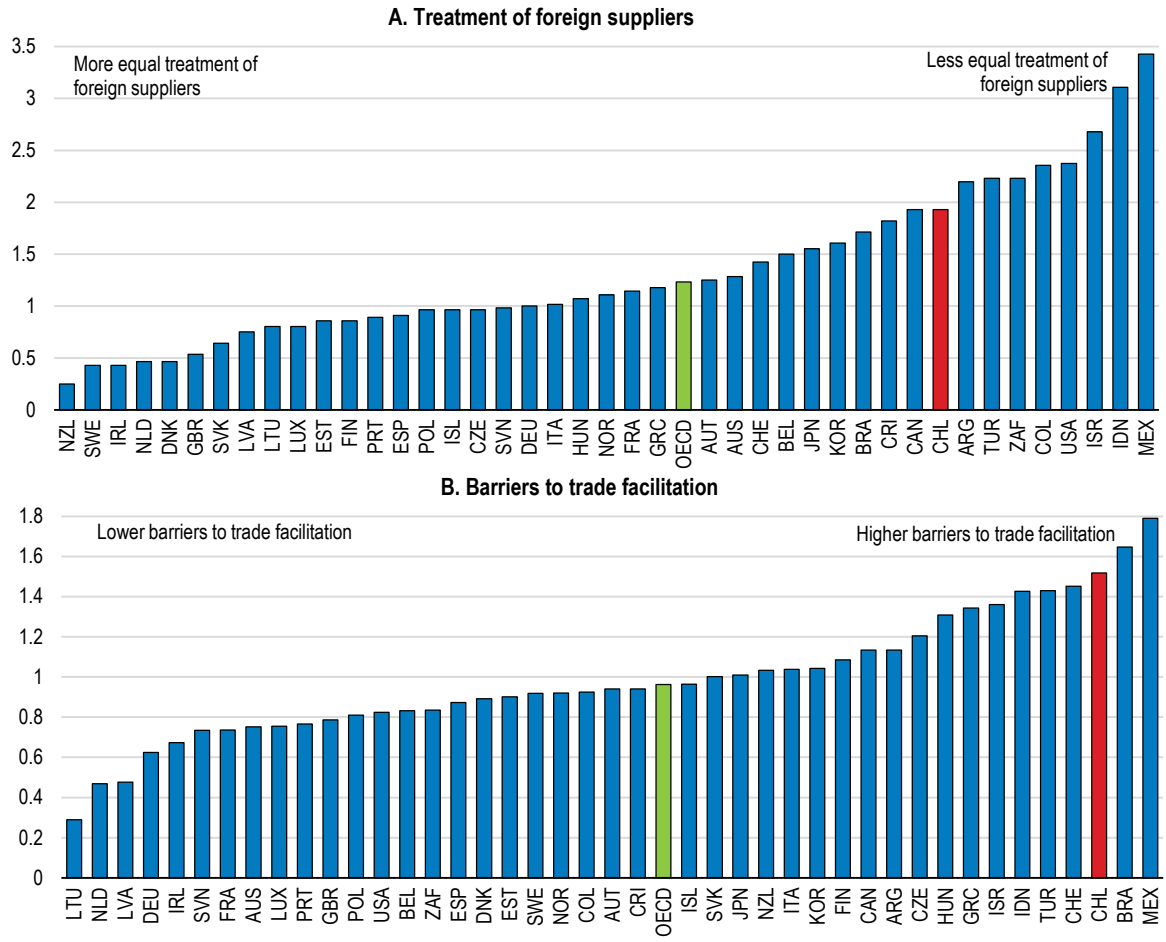
Source: Central Bank of Chile.

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Despite this positive backdrop, foreign suppliers face significant discrimination in public procurement processes (Figure 1.28, Panel A), and higher barriers to entry in key network and services industries (OECD, 2018[50]). One example is cabotage maritime transport, where the whole crew must be national and foreign competition is effectively ruled out by law. Current discussions in Congress to lift these foreign participation restrictions should be accelerated. Chile's peculiar geography affords a promising role to cabotage in domestic cargo transport, and higher transport costs limit inter-regional competition and the competitiveness of Chile's exporters, besides hurting consumers through higher prices. Regulatory reforms that can help to reduce prices would be particularly useful in the current high-inflation context (see above).

There is also scope to reduce barriers to trade facilitation (Figure 1.28, Panel B). These reflect complex technical and legal procedures ranging from border procedures to the simplification and harmonisation of trade documents, in addition to a lack of cooperation between different agencies. A single window for international trade transactions was created to harmonise paperwork and reduce administrative burdens, but only part of exports and imports are being handled by this new facility. Requirements regarding documents could be simplified, while wider use of advance rulings could enhance regulatory transparency.

Figure 1.28. Regulations affecting international trade and investment could be improved



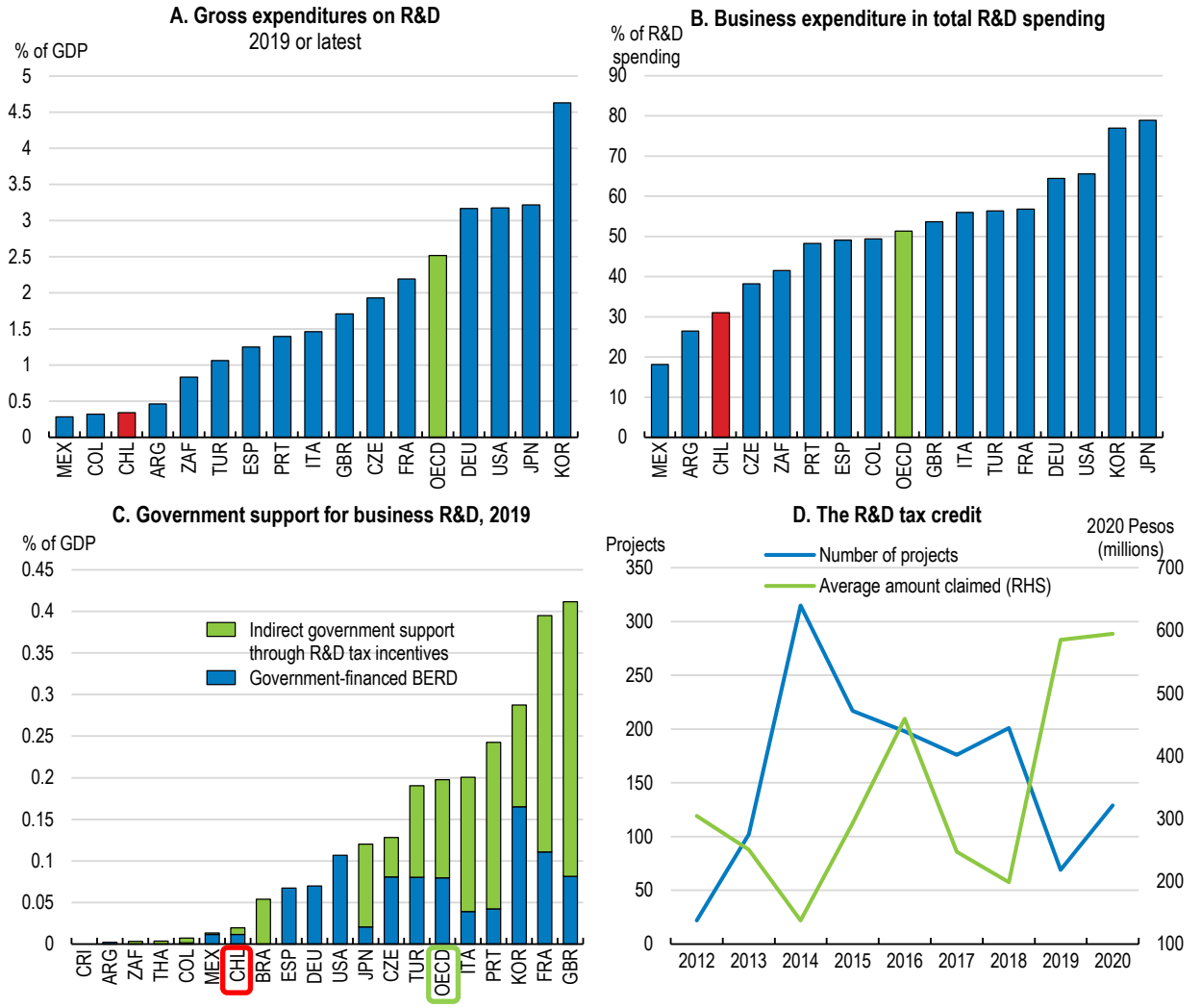
Source: OECD Product Market Regulation database 2018, available at http://oe.cd/pmr.

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Enhancing innovation and research

Overall spending on research and development (R&D) and innovation is relatively low, and only a minor fraction of this spending comes from the business sector (Figure 1.29, Panels A and B). Main instruments include direct subsidies (around 60% of overall public support funds) and an R&D tax credit (around 40% of support), which is a balanced mix, but overall government support levels are low and could be raised further (Figure 1.29, Panel C). Policies to promote business R&D could not only be strengthened and receive additional funding, but also be better coordinated and aligned with strategic priorities such as sustainability, as they currently suffer from significant fragmentation, as highlighted in the 2018 OECD Economic Survey of Chile (OECD, 2018[35]).

Figure 1.29. R&D and innovation spending and support remain low



Source: OECD, Main Science and Technology Indicators database; OECD, R&D tax expenditure and direct government funding of BERD database; CORFO (2018), Informe de Gestión 2014 - 2018, Logros y resultados de INNOVA CORFO.

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Among direct support programmes, one programme managed by the Chilean National Development Agency CORFO, the main provider of innovation support, provides financing for innovation projects carried out within private firms. A separate programme managed by the National Science and Technology Council (CONICYT) provides funding for collaboration with external academic and technology institutions (Crespi et al., 2020[51]).Empirical evidence suggests that while both of these programmes have led to higher R&D expenditures in recipient firms, as would be expected, only the collaboration with external institutions has generated positive spill-over effects on non-participating firms (Crespi et al., 2020[51]). These spill-over effects suggest the presence of positive externalities that are not taken into account by the recipient firms since they benefit other firms. This means that social returns exceed private returns and constitutes a strong argument for public policy support. This result suggests substantial benefits a stronger focus of direct R&D funding on collaboration with external institutions. The scope for this kind of collaboration has been enhanced by Chile's successful attempts to attract a total of 13 R&D centres through public support, including eight leading international universities or public research institutes and five multinational enterprises from seven different countries (Guimón et al., 2018[52]).

This empirical work, and the differences across programmes that it detected, also highlights the importance of more regular policy impact evaluations than currently undertaken, with a view towards expanding R&D support programmes that are proven to work, and closing down or adjusting ineffective ones. More regular evaluation would likely require enhanced data collection efforts and more independent studies, as recommended in the 2018 OECD Economic Survey of Chile (OECD, 2018[35]).

The take-up of the R&D tax credit has generally fallen short of expectations, despite having increased over the last decade (Figure 1.29, Panel D). The tax credit was broadened substantially in 2012 to apply to internal expenditures, in addition to an increase in the annual tax credit ceiling, simplified administrative requirements and eased domestic and international collaboration. Still, some of its certification procedures of R&D expenses remain lengthy and complex. Delays in the certification of R&D expenditures by the National Development Agency, for example, have led to the need to rectify tax declarations ex-post, which may trigger tax audits and reduce the attractiveness of applying for the tax credit in the first place. For young firms that typically lack taxable profits for the first years of operation, the R&D tax credit will only provide an effective incentive if it is made refundable. Refundable tax credits have become increasingly common in other OECD countries, such as Australia, Canada, Denmark, Norway and the United Kingdom. In addition, more could be done to remedy a lack of awareness of the tax credit among small enterprises, as in the case of direct support. At the same time, adding incremental incentives based on their past R&D spending could improve its effectiveness for larger firms (Appelt et al., 2016[53]).

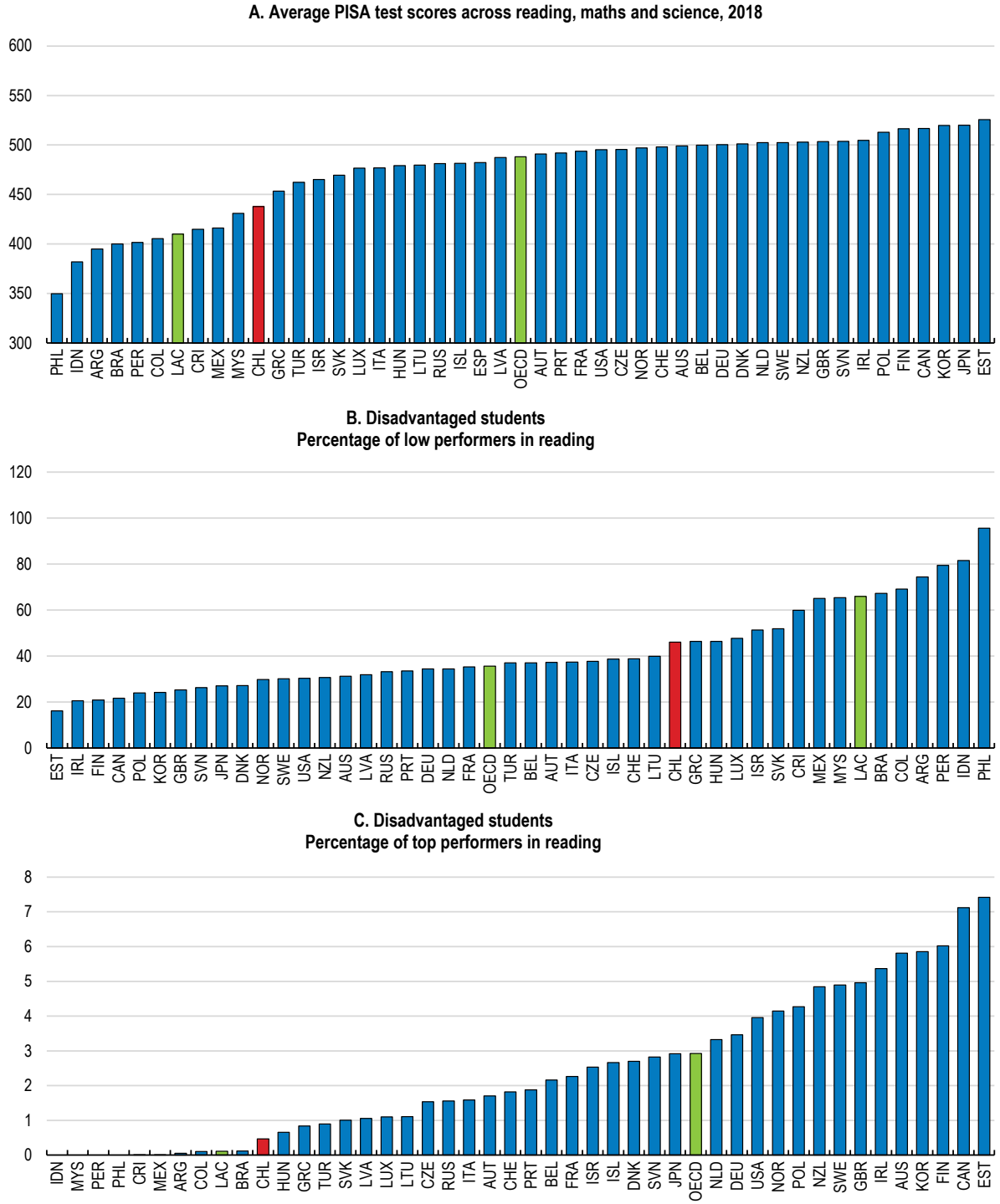
To address some of these concerns, a draft tax reform submitted to Congress in 2022 includes new modifications to the R&D tax credit, including higher ceilings, simplifications of the application procedure for these benefits, measures to reduce the uncertainty in the process and to lower administrative barriers, as well as making the tax credit refundable for SMEs with low or negative profits. Specific incentives for sustainability-related R&D are also set to be strengthened. In addition, companies that have invested in productivity-enhancements or have carried out R&D activities will be able to reduce their effective corporate tax burden by up to 2%.

Improvements in education can foster productivity and equity

Education is key for raising productivity and reducing inequalities at the same time. A better educated workforce will also allow further reductions in labour informality, given that higher labour productivity makes jobs less sensitive to the higher wage and non-wage labour costs prevalent in the formal sector. The education system has made substantial progress in improving coverage and performance in the last decade, but substantial challenges related to quality and equity remain. Learning outcomes remain well below the OECD average (Figure 1.30). Pandemic-related school closures have exacerbated these longstanding challenges, as only 27% of students from vulnerable backgrounds used digital tools to remain connected to education, compared to 89% of students from high-income households (CEM, 2020[54]). Chile has already implemented some targeted pilot programmes to reverse the negative impact of school closures and re-engage those who dropped out, these should be expanded nationwide.

Expanding access to quality early childhood education is a key priority. Quality early education supports children's outcomes later in life, including in labour market participation, reduction of poverty, increased intergenerational social mobility and social integration (OECD, 2018[55]). It is also one of the most effective ways to address future drop-outs (Heckman and Masterov, 2007[56]; OECD, 2016[57]). In addition, expanding universal early education would also improve female outcomes in the labour market, which continue to be lagging behind other countries. Coverage for 4 and 5 year olds reached 86% and 96% respectively, in 2019, close to the OECD average. Still, for children aged 3, coverage, at 58%, remains far below the OECD average of 77% (OECD, 2021[58]). Substantial expansions of public early education capacity have been announced and should be implemented swiftly, especially for low-income families and in rural areas.

Figure 1.30. Learning outcomes remain relatively low and dependent on socio-economic status



Note: Disadvantaged students are defined as those in the bottom quarter of the economic, social and cultural status. Low performance is defined as scoring below the minimum proficiency of level 2, top performance is defined as level 5 and above.
Source: OECD, PISA 2018 Database.

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Early childhood education is fragmented, with different financing mechanisms and teacher career developments depending on the type of institution in charge, and this gives rise to entrenched inequities. Public institutions co-exist with a large number of contract nurseries and kindergartens, often operated by municipalities, which receive some central government funding and account for the bulk of enrolment from

ages 0 to 4. However, their overall funding is lower than that of public institutions, with implications for quality. Improving the funding of current contract institutions with central government funds would likely deliver better outcomes, perhaps with a view towards unifying these fragmented parallel systems in the future. Furthermore, unifying the system of evaluation, continuous training and salary benefits for teachers and principals to the National System of Professional Development would improve the quality of early childhood education.

In primary and secondary education, a 2015 reform improved equity by putting an end to the widespread practice by which school that receive public funds selected students, requested co-payments and aimed for profits. The reform also increased teacher performance incentives by providing them with better career prospects at all levels of education. Authorities should continue to monitor and discourage school-level practices that stand in the way of equal opportunities for all students (OECD, 2017[59]). Efforts to develop stronger professional pathways for teachers and principals should be continued, and would likely need to include better remuneration, especially at the entry level where salaries are 32% below the OECD average, and shorter working hours, as current statutory working hours are the highest of all OECD countries (OECD, 2019[60]). As more disadvantaged schools and areas often lack high-quality teachers, improving the incentives for high-quality teachers to relocate at least temporarily can help to reduce inequalities, and Chile should build on its successful advances in this area (Bertoni et al., 2018[61]; Elacqua et al., 2019[62]).

Higher education enrolment increased significantly over the last decades, which will slowly improve a legacy of low tertiary attainments. Disparities in access to tertiary institutions reflects inequalities at the earlier stages of education (World Bank, 2021[1]). Students from low-income families attend low-quality schools and often fail to reach the levels of competencies that would allow them to enter the best universities (Schwartzman, 2021[63]). Since 2016, a “tuition-free policy” provides free tuition for students in the lower 60% of the family income distribution, however enrolment among these students has not dramatically increased (World Bank, 2021[1]). Academic catch-up and support programmes for students from vulnerable backgrounds should become a priority, and resources under the free education policy should focus on the most disadvantaged students. For students from middle class backgrounds, government-backed student loans should become the instrument of choice, with repayment terms based on future income.

Strengthening institutions and fighting corruption

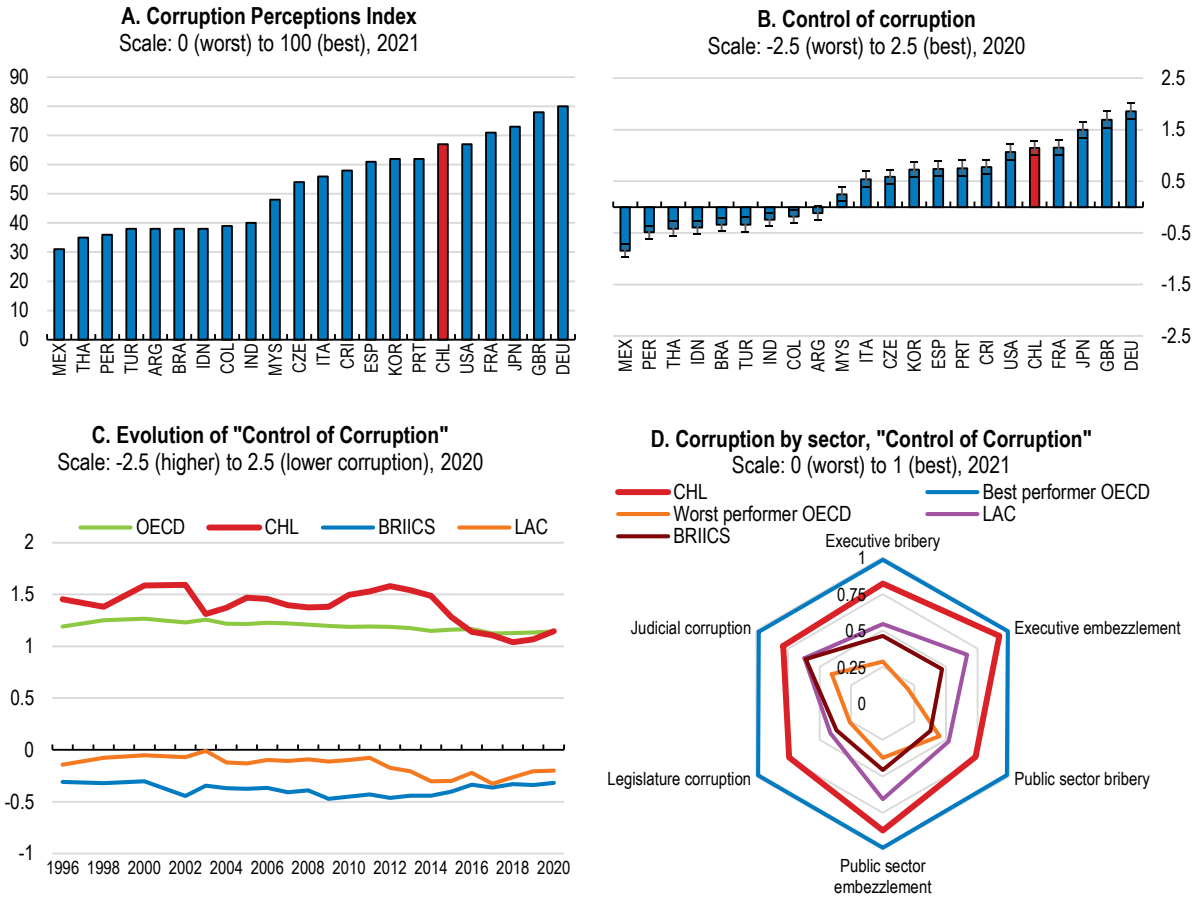
Productivity also hinges on strong governance and institutions. Corruption indicators point to a strong position of Chile’s institutions in several dimensions, including subjective corruption perceptions, measures to control corruption, and also indicators reflecting more detailed aspects of integrity efforts (Figure 1.31). Among regional peers, Chile’s performance compares particularly well. This reflects firm steps taken to strengthen integrity and transparency policies, especially since the recommendations of the "Engel Commission" in 2015 (Consejo Anticorrupción, 2015[64]).

Mitigating the risks of undue influence in policymaking by strong private interests is fundamental for a fair and clean business environment, and to safeguard trust in public institutions. Chile has comprehensive regulations in the areas of lobbying, conflict of interest, financing of political parties and election campaigns, but accountability could be strengthened by eliminating barriers that currently prevent citizens and non-citizens from accessing relevant information. In particular, Chile could ensure that all members of government, congress and highest bodies of the judiciary comply with the obligation to submit their interest declarations without exceptions and that this information be made available to the public. In addition, the Electoral Service of Chile could improve the collection of relevant information to provide data about the financing of political parties and election campaigns.

Public procurement and infrastructure projects are typical high-risk areas for corruption. Harnessing competition among potential providers is crucial, and requires an even playing field and full transparency. Chile’s procurement framework affords a preference to public tenders, but fails to set and enforce rules for

when direct purchases, which are less transparent, can be used instead. A review of 400 randomly selected public procurement cases by the Competition Authority revealed widespread use of direct purchases with weak justifications for sidestepping public tenders and substantial difficulties in access to information (Fiscalía Nacional Económica, 2020[65]). Where tenders were used, they often included elements that hamper competition such as explicit reference prices, short tender periods, the definition of a preferred brand and few competing participants. A recent draft law that aims to clarify the rules and strengthen enforcement is currently discussed in Congress. Approving it swiftly would likely allow substantial cost savings, given the significant waste of public resources documented.

Figure 1.31. Corruption indicators



Note: Panel B shows the point estimate and the margin of error. Panel D shows sector-based subcomponents of the "Control of Corruption" indicator by the Varieties of Democracy Project.
Source: Panel A: Transparency International; Panels B & C: World Bank, Worldwide Governance Indicators; Panel D: Varieties of Democracy Project, V-Dem Dataset v12.

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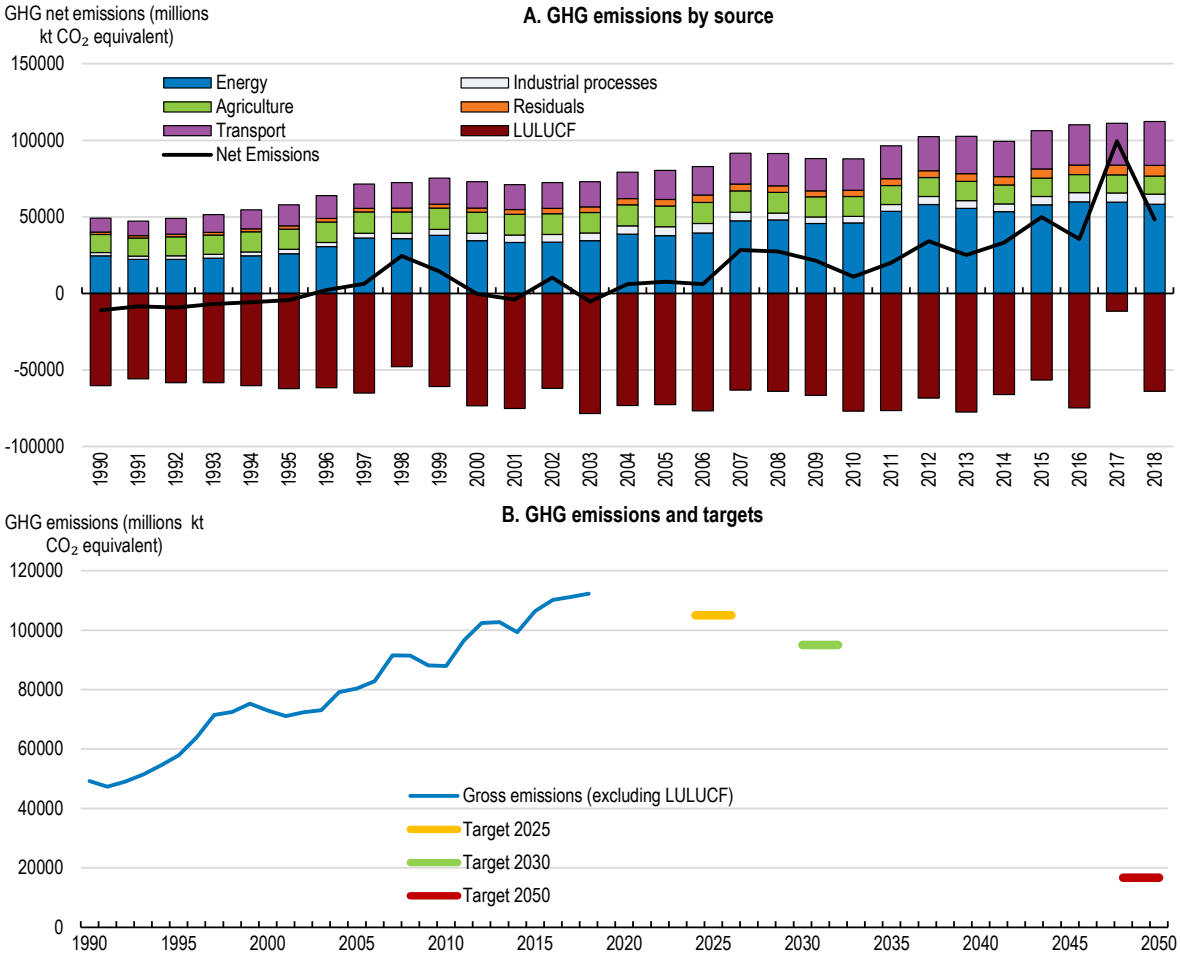
Fostering sustainable and green growth

Chile has made substantial progress in making growth more sustainable, and its 2022 Framework Law on Climate Change made it the first Latin American country to make emission targets legally binding. Nonetheless, current progress is still falling significantly short of the country's potential to contribute to the global energy transition, especially with respect to renewable energy and green hydrogen. An expansion of these activities could also foster job creation and support economic transformation and a diversification of exports, which has been declared a priority by the current administration.

Further efforts are needed to decarbonise the economy

In the context of its National Determined Contribution (NDC) to the Paris Agreement, Chile has committed to achieve carbon neutrality by 2050 and an absolute total greenhouse gas (GHG) emission target of 95 $MtCO_2e$ by 2030, excluding emissions or removals from the land use, land use change and forestry (LULUCF) sector. This implies a 30% reduction in emissions intensity by 2030 compared to 2017 levels. A GHG emissions budget of 1,100 MtCO2e between 2020 and 2030 results in an implicit estimated target of around 105 $MtCO_2e$ for 2025, when emissions are supposed to peak (CAT, 2021[66]). Total emissions increased significantly between 1990 and 2018, when they reached 121 MtCO2e. This suggests that under current policies, the 2030 target is unlikely to be met (Figure 1.32). However, planned policies under Chile's Long-term Climate Strategy would cause emissions to peak before 2025, overachieving the 2030 NDC targets and putting Chile's emissions on a declining trend slightly above the 1.5-degree compatible pathway range (CAT, 2021[66]).

Figure 1.32. Energy and transport are the major source of GHG emissions

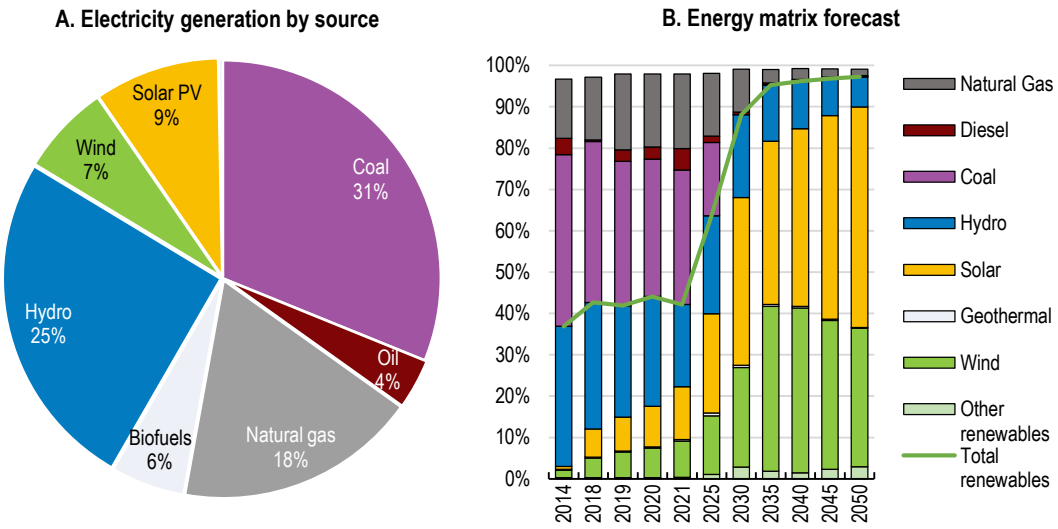


Note: The term «Net GHG emissions» refers to the sum of national GHG emissions, expressed in CO_2 eq. On the contrary, the total GHG emissions term excludes emission sources and removals from the land-use change and forestry sector. LULUCF stands for land use, land-use change and forestry.
Source: Inventario Nacional de Gases de Efecto Invernadero (INGEI). https://snichile.mma.gob.cl/documentos/Inventario_Nacional_de_GEI-1990-2018.xlsx.

StatLink https://stat.link/jud1fw

Energy is responsible for 52% of GHG emissions, followed by transport with 25%, while the land use category has consistently absorbed CO_2. All of these sectors present significant further mitigation potential (INGEI, 2020[67]). The burning of fossil fuels for electricity generation and heavy transport is one main source of emissions. Coal remains the major source of electricity and accounts for 31%, some 10 percentage points above the OECD average (Figure 1.33, Panel A). At the same time, renewable sources produce 47% of electricity. Since 2014, however, the role of fossil fuels has declined while solar and wind energy have steadily gained importance, a development that is set to accelerate over the next decades (Figure 1.33, Panel B). The 2021 Energy Efficiency law has become the main legal framework, generating over 2% of emission reductions per year until 2030, while the coal phase-out plan of 2019 was strengthened (CAT, 2021[66]).

Figure 1.33. Fossil fuels still represent an important share of the energy matrix



Source: IEA Electricity Information https://www.iea.org/data-and-statistics/data-product/electricity-information; Ministerio de Hacienda, available at https://energia.gob.cl/sites/default/files/documentos/pelp2023-2027_informe_preliminar.pdf.

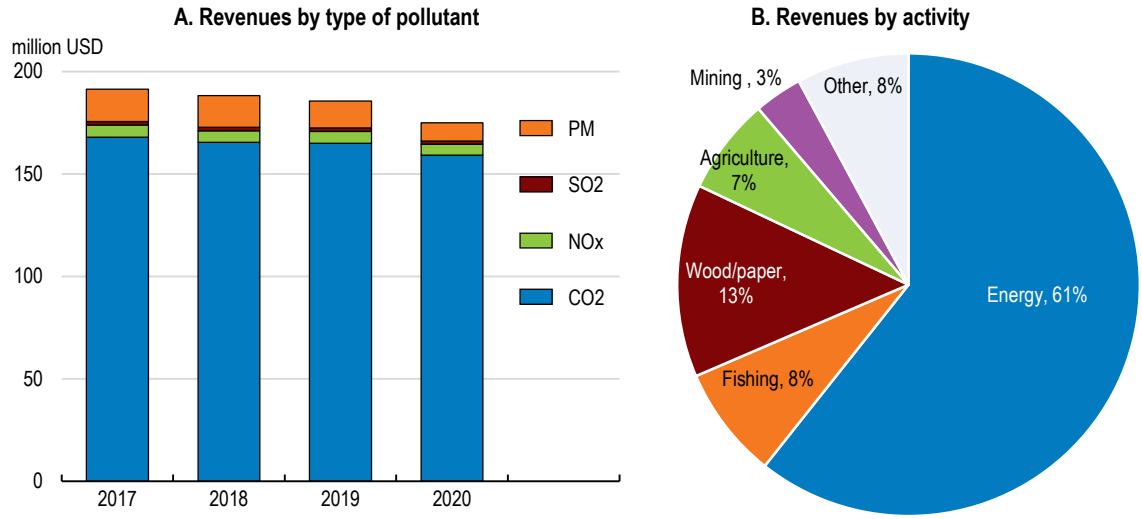
StatLink https://stat.link/c486fm

Chile has a unique potential in the generation of electricity from renewable energy sources. Sun radiation in the country's desert north is among the highest on earth, and the total solar power potential has been estimated at 1800 Gigawatts (GW), to which the best onshore wind resources in the world, concentrated in the south, add around 37 GW (Ministerio de Energía and GIZ, 2014[68]; IEA, 2018[69]). Chile's current total electricity generation capacity is around 25 GW. Not surprisingly, Chile has been a top recipient of foreign direct investment inflows in renewable energy. Better cross-border interconnection would allow exporting more electricity within the region (Timilsina, Deluque Curiel and Chattopadhyay, 2021[70]). Electrification of the vehicle fleet also has strong potential to reduce emissions from transport, in addition to green hydrogen, which can be used to power heavy vehicles, for example in the mining sector.

Further progress in decarbonising the economy will require both more stringent regulations and more consistent price signals. In terms of regulations, the recent decision to close all coal-fired power plants by 2030 is an ambitious step that addresses a key source of GHG emissions. In the transport sector, only zero-emission vehicles can be sold after 2035, including light vehicles, public transport and machinery, including mining trucks. There is also scope to strengthen environmental impact evaluations to adjust existing regulations to environmental objectives, and to consistently apply the price of greenhouse gas emissions in public sector cost-benefit analyses, for example by using an explicit shadow price for Greenhouse gas (GHG) emissions.

On the price dimension, the gap with current international best practice remains significant. Taxes on emissions of pollutants were introduced in 2017 and a large share of its revenues come from a carbon tax on fixed sources of CO2 emissions, at a level of USD 5 per ton of CO_2 emitted (Figure 1.34). This is very low compared to commonly used international benchmark of EUR 60 per ton (OECD, 2021[71]).

Figure 1.34. Green tax revenues come from the most polluting industries



Source: OECD calculations based on (Bernal, 2019[72]; Oronoz et al., 2021[73]; Fundación Terram, 2021[74]).

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The limited impact of the carbon tax may be related not only to its low level, but also to its limited coverage. Power plants, which are major emitters, can receive partial carbon tax reimbursement of around 20%, and even those that use renewable sources are taxed. A recent 2020 reform entirely exempts power plants using renewable sources from the carbon tax as of 2025, but this implementation could be anticipated to accelerate the transition towards renewables.

The reform also introduces the possibility to offset CO_2 emissions with government-certified GHG abatement certificates from other companies. This will pave the way for a more sophisticated carbon market and provide incentives for carbon capturing, in line the recommendations of the Paris Agreement. A cap and trade system, planned to be set up by 2026, will limit emissions at the level of each power plant and allow them to exchange permits among each other through trade and auctions (Ministerio de Energía, 2022[75]; WWF Chile, 2021[76]). The current level of the carbon tax, however, limits these certificates to abatement efforts whose cost is below USD 5 per ton of CO_2.

Future efforts in carbon pricing should be concentrated on establishing a gradual timeline towards higher levels of the carbon tax and wider implementation of cap and trade systems. A medium-term objective of a carbon price of at least USD 35 would better reflect the true social cost of polluting, although even that would likely still be insufficient (IMF and OECD, 2021[77]; García and Poblete, 2020[78]; OECD and CEPAL, 2016[79]). Higher carbon prices are crucial to accelerate the transition towards sustainable energy sources, where Chile has a significant potential for future growth.

During the transition, there is a risk that consumer electricity prices may rise, although renewable energies are already the cheapest source of electricity generation and their cost competitiveness will limit such effects to the short term. Meanwhile, the purchasing power of low-income households could protected through targeted cash transfers, as done to cushion the impact of the Russian aggression on Ukraine. This would be preferable over non-target price subsidies.

A wider discussion about climate objectives and trade-offs involved could help to improve political acceptance of higher carbon prices, and could be fostered through the use of climate advisory boards, as has been done in the United Kingdom for example, or other institutionalised channels for climate policy dialogue. Drawing specific groups into the discussion in an institutionalised way could also help, especially young people, for whom climate risks are creating profound uncertainties (INJUV, 2018[80]; OECD, 2020[81]). For example, Chile's youth council ("Gabinete Juvenil") operated by the National Institute of Youth (INJUV) brings together over 155 young people aged 15-29 and could be involved more in discussions about climate policies.

Chile has been at the vanguard of leveraging debt management for sustainable growth, which has allowed a broadening of the investor base. Environmental Sustainable Governance (ESG) bonds have been issued since 2019 and constitute 29% of the sovereign debt stock, with half of them linked to social initiatives. Green bonds make up 26% of ESG issuance and include clean transport, renewable energy, water resources management and green buildings, but could be expanded to finance carbon sinks in forests and oceans. More recently, Sustainability-Linked Bonds are not earmarked for financing specific projects, but instead their coupon is linked to the country's performance on sustainability goals such as GHG emission reduction commitments (Ministerio de Hacienda, 2022[82]). For example, a failure to meet the commitment of sourcing 60% of electricity from renewables would trigger a coupon penalty for these bonds.

Harnessing the potential of green hydrogen

Chile's extraordinary renewable energy potential makes it well-placed to become a major producer and exporter of green hydrogen, whose main virtue lies the possibility of transforming, storing and transporting energy obtained from renewable sources (Box 1.2). Green hydrogen could represent 21% of the emission reductions required for carbon neutrality (GIZ, 2020[83]), and is the only technology known so far that can decarbonise some hard-to-abate processes in heavy industry (Cammeraat, Dechezleprêtre and Lalanne, 2022[84]). Its exceptional climatic conditions could allow Chile to provide the most affordable green hydrogen in the world, which could generate new employment. Estimates suggest a potential 70% decrease in production cost by 2030 in Chile, which would give it a 20% cost advantage over competitors (ICCT, 2020[85]; McKinsey & Company, 2020[86]).

Box 1.2. Green hydrogen: A novel technology with many applications

Hydrogen can be used as an energy vector, like electricity or heat, and provide stored electricity when needed, besides other more direct applications in manufacturing, agriculture and long-distance transportation (Richel, 2022[87]).

Currently, most of the world's hydrogen supply is produced through steam methane reforming, a mature production process in which high-temperature steam is used to separate hydrogen from a methane source, such as natural gas. This process generates so-called "grey hydrogen", involving significant CO_2 emissions.

A more novel process of generating hydrogen called electrolysis uses electricity to split water into hydrogen and oxygen. To the extent that this electricity comes from renewable sources, the process produces so-called "green hydrogen" (World Economic Forum, 2021[88]). Green hydrogen currently only accounts for 0.1% of the total hydrogen production, given the high cost of the electrolysis process.

Chile has formulated a national strategy for green hydrogen to develop a local hydrogen market in industries such as oil refineries, ammonia production and freight trucks. There is a risk, however, that the development of hydrogen gets slowed down by the uncertainty surrounding both supply and demand. On one hand, total renewable electricity capacity is still insufficient to supply large amounts of hydrogen at this

point. On the other hand, demand for hydrogen is still limited and the adoption of hydrogen-using technologies will depend on sufficient supply and the supporting infrastructure coming online in a timely way (IEA, 2021[89]). As a result, there may be a case for developing a market for hydrogen with some support from the public sector. In June 2022, a new "Committee for the Development of the Green Hydrogen Industry" was established to accelerate the development of this industry. Over ten ministries coordinate their actions in the Committee to address issues of local demand, land planning, project financing and development, permits and potential risks. Its functions include the implementation of the National Green Hydrogen Strategy, research and development, capacity building and promotion instruments.

Fostering the emergence of a hydrogen market could involve different policy efforts. Expanding renewable energy production, including through a higher carbon price, is one way forward. Tightening command-and-control regulations, for example in the mining sector, may be a way to achieve costly but feasible investments in hard-to-abate sectors, and could create a reliable source of demand. Replacing fossil fuels in mining trucks with hydrogen, for example, is the most promising way to reduce the industry's CO_2 emissions. Public mining companies could take the lead on this path.

In addition, a reliable regulatory framework will be needed to provide more certainty for investors. Regulation should minimise entry barriers for new competitors and define standards on equipment specifications, guarantees of origin, hydrogen purity and infrastructure requirements. Adopting ISO standards related to hydrogen could send a positive market signal (OECD, 2022[90]; IEA, 2021[89]). Likewise, developing indicators to quantify the emission reductions of switching to green hydrogen will be key for a wider adoption, as this will allow the issuance of credible and tradable emission reduction certificates.

Green hydrogen technologies are still incipient and require additional technological progress in several areas. Converting hydrogen back into electricity, for example, is still subject to substantial inefficiencies and losses. Public policies could provide specific incentives for research collaboration between research institutions and investors on hydrogen-related technologies.

Developing a competitive green hydrogen industry may also help to further diversify Chile's export base. Given the novelty of the technology and the yet largely undeveloped global market for green hydrogen, these endeavours may benefit from a coordinating role for the public sector, including fostering the allocation of credit to this incipient sector through a planned public development bank. However, the experience of other Latin American countries, in particular Brazil, suggests that transparent credit allocation criteria are crucial, and where credit subsidies are involved, these should be temporary and tied to clear performance indicators, with regular ex-post evaluations. Otherwise, there is a risk that credit subsidies grow rapidly and fail to effectively promote stronger investment and productivity growth (Bonomo, Brito and Martins, 2015[91]; Pazarbasioglu-Dutz et al., 2017[92]; OECD, 2018[93]). There should also be a well-defined exit strategy from policies to promote green hydrogen, in case that the technology does not live up to current expectations.

Table 1.4. Past OECD recommendations on structural policies

Recommendations	Actions taken since the 2020 Survey
Step-up investment in high-quality early childhood, primary and secondary education. Enhance the provision of childcare and early childhood public structures.	Announced policy packages aim for additional investments of 0.04% of GDP in public education, including through improvements in education infrastructure and training with digital tools.
Strengthen the redistributive impact of the personal income tax by lowering the thresholds at which the bottom and top bracket apply.	A tax reform has been submitted to Congress. Among other things, the reform will enhance the progressivity of personal income taxes, but it will not reduce the basic deduction.
Increase digital literacy in schools giving digital skills more prominence in the national curriculum, and enhancing the digital skills of teachers and school-directors.	No action taken. A national education plan aims to promote access to IT devices and improve the digital skills of teachers.
Embark on a full revision of firm-provided training programmes to increase relevance and quality of training and better target participation to vulnerable workers.	No action taken.
Streamline permits and their process by implementing a zero-licensing procedure to encourage investment and simplify regulations for SMEs.	Progress has been made at the central government level, but municipal licenses continue to be burdensome. A programme for SMEs called ´Pyme Ágil' has been creating a digital channel for the management of centralized municipal license applications since 2020.
Boost public support to SMEs, in cooperation with the private sector, trough targeted programmes to facilitate the adoption digital tools.	Courses for workers and small enterprise owners have been created to increase digital toolkit adoption and usage.
Foster a collaborative digital innovation ecosystem by strengthening business collaboration and fostering open-innovation practices.	No action taken.
Ensure low barriers to entry to the communication sector by replacing the existing regulation for concessions.	No action taken. A project has been announced to address regulations in the telecommunication sector.
Carefully screen the environmental impacts of stimulus measures in the wake of the outbreak to avoid unintended environmental consequences. Condition direct financial support measures for pollution-intensive sectors that may be particularly affected by the crisis to cost-efficient and verifiable environmental improvements.	No action taken.

Table 1.5. Policy recommendations from this chapter (Key recommendations in bold)

MAIN FINDINGS	RECOMMENDATIONS
Refining macroeconomic policies and reforming taxation	
Inflation has risen above 14 percent and inflation expectations over a 2-year horizon now exceed the inflation target, despite timely monetary tightening.	**Maintain a restrictive monetary policy stance to ensure the return of inflation to target.**
Public debt has risen, the economy has recovered strongly from the pandemic-related downturn and inflation has risen significantly above target.	**Keep the pace of fiscal consolidation in line with current fiscal plans including a strong reduction of public expenditure during 2022.**
The current tax intake of 21% of GDP is insufficient for achieving sizeable improvements in social protection and public services such as health and education, and for achieving more inclusive and sustainable growth.	**Mobilise additional tax revenue through a comprehensive reform of personal income taxes, property taxes and improvements in tax administration.**
Traditionally deep financial markets have been affected by extraordinary pension fund withdrawals, resulting in shorter maturities and higher rates.	**Ensure that part of future pension contributions are saved and invested in the capital market.**
The fiscal rule has failed to prevent a rise in public debt and lacks a formal escape clause, leaving details about departures from the rule undefined.	**Enhance the fiscal rule with a debt anchor and an escape clause that defines conditions for departing from it, and a trajectory to return afterwards.**
Significant scope exists for improving the efficiency of public expenditures without prejudice to achieving policy objectives.	Strengthen spending efficiency, including by unifying fragmented income support schemes and re-organising innovation and research support programmes.
Strengthening productivity and competition	
Lengthy and tedious municipal licensing procedures continue to hamper entrepreneurship and competition. Research and development spending is low.	**Streamline and unify municipal licensing procedures and foster the digitalisation of relevant procedures.**
Many regulations may have become obsolete and digitalisation provides plenty of opportunities to reduce compliance costs.	**Review of the stock of existing regulations and their competition impact. Move towards "zero-licensing" schemes wherever possible.**
Weakly defined rules for approving large investment projects have given rise to uncertainty about outcomes, often at the end of the administrative process.	Define clear rules for approving large investment projects.
Regulatory impact assessments have become mandatory for new regulations, but compliance is low.	Ensure a more consistent use of legally required regulatory impact assessments through stronger sanctions for non-compliance.

The competition authority has been undertaking market studies of key sectors, which revealed significant need for action.	**Ensure an adequate budget for the Competition Authority, in particular for the funding of market studies.**
Notaries are needed for more than 200 procedures and the sector is characterised by high entry barriers.	Reduce the mandatory recourse to notaries and extend the use of electronic signatures.
Foreign providers still face significant additional burdens when participating in public procurement processes.	Reduce the differential treatment of foreign suppliers in public procurement.
Current rules mandate that the whole crew must be national in cabotage transport, and places severe limits on the participation of foreign vessels.	Lift foreign participation restrictions in cabotage maritime transport.
Technical and legal procedures for international trade are complex and can act as trade barriers.	Improve trade facilitation through simplification of procedures, better inter-agency coordination and wider use of single windows and advance rulings.
Support for research and development is fragmented into several programmes which lack systematic and regular evaluations.	**Enhance R&D support focusing on the most effective programmes, maintaining a balanced mix between direct support and tax credits.**
Improving opportunities and outcomes in education	
Early childhood education is key for improving learning outcomes later in school, but funding is highly unequal across institutions. Female labour market participation is low, partly due to a lack of care facilities.	**Expand access to early childhood education to all children from age three. Expand the central government funding of pre-school educational institutions that are not managed by the central government.**
Low remuneration and long working hours make the teaching profession less attractive than in other OECD countries, and disadvantages schools struggle to attract highly skilled teachers.	Improve teacher remuneration and working conditions, and strengthen incentives to attract good teachers to disadvantaged schools.
Covid-related school closures have exacerbated inequities in the education system, as students from vulnerable backgrounds struggled to access digital tools to remain connected to education.	Expand efforts to reverse the negative impact of pandemic-related school closures and re-engage those who dropped out of school.
Strengthening economic governance and the fight against corruption	
Tender calls are meant to be the standard form of public procurement, but there are no clear rules when direct contracting can be used instead.	**Clarify the rules for using tender calls in public procurement and strengthen compliance with these rules.**
Chile has comprehensive regulations in the areas of lobbying, conflict of interest, financing of political parties and campaigns, but not all relevant information is publicly available.	**Ensure that all members of government, congress and highest bodies of the judiciary submit their interest declarations without exceptions.**
Making growth more sustainable and greener	
Total emissions increased significantly between 1990 and 2018. Existing regulations re not always aligned with environmental objectives. The carbon tax is too low to drive the transition towards wider use of renewable energy sources and hampers emission-trading schemes.	**Accelerate progress in decarbonising the economy through more stringent regulations and more consistent price signals, using both carbon taxes and cap and trade systems, while protecting the purchasing power of vulnerable households.**
Power plants using renewable energy sources currently pay the same carbon tax per output as those generating carbon emissions.	**Consider accelerated exemptions for power plants using renewable energy sources from the carbon tax.**
Environmental impact evaluations are not widely used to adjust existing regulations and decision criteria to environmental objectives.	Consistently apply the price of greenhouse gas emissions in public sector cost-benefit analyses, for example by using an explicit shadow price for greenhouse gas emissions.
The development of hydrogen may get slowed down by the circular uncertainty surrounding both supply and demand.	Explore measures to develop a market for hydrogen, including by creating demand through regulations, for example in the mining sector.
Evaluating the effects of the carbon tax on emission reductions is difficult to a lack of relevant data.	Publish information on tax collection and emissions at the level of individual emitters.
The issuance of tradable certificates for emission reductions resulting from hydrogen adoption hinges on clear quantification guidelines.	Develop indicators to quantify the emission reductions of switching to green hydrogen.
Green hydrogen technologies are still incipient and require additional technological progress in several areas.	Provide specific incentives for collaboration between research institutions and investors on hydrogen-related technologies.

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2 Towards lower poverty and inequality in Chile: Strengthening social protection and job quality

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Chile has developed one of the most comprehensive social protection systems in Latin America. However, after the social unrest in late 2019, the pandemic has highlighted significant gaps in social protection, in particularly among informal workers. A key lesson emerging from the pandemic is the need for developing a better social protection system that does not differentiate between formal and informal workers. Ensuring some basic social protection coverage for all, including in pensions, health and unemployment insurance, while simultaneously reducing the cost of formal employment, would reduce labour informality. Unifying social assistance programmes into a single cash benefit scheme while increasing coverage and benefits and providing incentives to take up formal employment will be key to tackle poverty and raise job quality. These reforms would raise productivity and decrease inequality, two priorities and long-standing challenges.

Introduction

Chile has made remarkable progress in improving social outcomes such as poverty over the last three decades. Strong economic growth was one of the main factors explaining the social progress, in conjunction with the construction of a comprehensive social protection system. However, long-standing inequalities of opportunities and outcomes, economic insecurity, an unequal access to quality public services led to widespread social unrest at the end of 2019. Citizens' demands for better-quality social services such as health, pensions, and education, among others, were among the most frequently-voiced social demands. Inequalities of opportunities, including unequal access to high-quality public services, are not only an obstacle to social cohesion but also hold back productivity growth.

The COVID-19 pandemic has laid bare the strengths and weaknesses of current social protection policies. Chile has one of the most comprehensive social protection systems in Latin America, including a universal basic pension recently made available to all Chileans and universal access healthcare. Chile has also unemployment insurance and employment subsidies for formal-sector workers, and furlough and job retention schemes that were introduced during the pandemic. But informal workers, defined as those with no contributions to social security, account for almost 30% of the labour force, and have no similar protection to fall upon. Instead, they had to rely on emergency cash transfers put in place during the pandemic, whose roll-out suffered from significant implementation delays during the first months of the pandemic, given the previously patchy coverage of cash transfers. This led to high pressures on the authorities to approve extra-ordinary pension fund withdrawals and develop an almost universal cash transfer scheme in 2021. As a result, overall support overcompensated the loss of incomes during the pandemic and fuelled a temporary consumption boom and inflationary pressures. Although Chile did not have especially high mortality rates,, the pandemic was particularly deadly and infectious among vulnerable Chileans (Mena et al., 2021[1]; Villalobos Dintrans et al., 2021[2]; Gozzi et al., 2021[3]), suggesting that inequalities in living and health conditions and access to good-quality health services put these vulnerable groups at a significant disadvantage.

One key lesson that emerges from the pandemic is the need for developing a more effective social protection system, providing basic social benefits that do not differentiate between formal and informal workers. Effective social protection is key to protect workers against idiosyncratic shocks, such as job loss, and old-age poverty, but also to allow them to adapt to disruptions and changes. The pandemic has been the most visible example, but the digital transformation, climate change, population ageing, migration, and possible natural disasters are also likely to trigger adjustment processes whose social implications will need to be cushioned.

Improving social protection will also trigger substantial benefits for productivity and long-term growth (UNDP, 2021[4]). Effective social protection lays the grounds for enabling workers and their families to access better-quality jobs. At the same time, it helps low-income earners invest more in their health, their human capital and that of their children.

So far, the strategy to address the lack of coverage in social protection of informal workers and vulnerable people has been to develop non-contributory pillars in pensions and healthcare, in combination with cash transfers schemes that have helped to reduce poverty. However, these cash transfer programmes do not reach all of those in need and benefits are low. The healthcare system has achieved full coverage, but its financing encourages informality while access to high-quality services remains highly unequal. A recently established universal guaranteed minimum pension has helped to raise replacement rates, a long-standing challenge for Chile, although they continue to be low for women and middle-income workers, calling for further reforms.

The current dual architecture of social benefits generates disincentives for formal job creation, especially for low-income workers. Current formal-sector benefits are financed through social security contributions levied on formal labour. Although the causes for informality are multidimensional, including low quality

education and other worker and household characteristics, deficient public transportation, and complex regulatory burden, social security contributions drive a wedge between the cost of formal and informal hiring, and price many low-productivity workers out of formal employment, leaving many workers insufficiently protected and in low-quality jobs. In some cases, imperfect enforcement of existing regulations can allow firms to avoid the costs of social insurance and hire salaried workers informally. Other times, low-income or self-employed workers may face high costs of formalisation and prefer to remain informal, which is reflected in the low social insurance coverage.

The long-term goal of achieving universal formalisation and universal social protection coverage will require reforms to social security and social assistance schemes, coupled with adjustments to labour market policies. One solution would be to provide a basic level of pension, healthcare and unemployment benefits to all Chileans that is not tied to formal employment financing these from general taxation revenues, while reducing social contributions for low-income workers. This basic protection could then be complemented by a more comprehensive set of contributory benefits financed by progressive contributions.

Poverty could be reduced more effectively by unifying current cash transfer programmes into a single conditional cash benefit scheme with increased coverage and benefit levels, designed carefully to maintain strong work incentives. To achieve this, benefits should remain significantly below potential labour incomes, but they should also be withdrawn only gradually upon taking up formal employment, as otherwise beneficiaries might be reluctant to take up formal work for fear of losing their benefit. Tying benefits to individual behaviour that promotes future employment outcomes such as school completion, training and participation in public employment services would also help families to graduate from social assistance.

The main benefit of such a reform package would be to initiate a virtuous cycle between reductions in poverty and inequality and better growth prospects. Workers in the bottom 60% of the income distribution would clearly benefit from the better formal job opportunities and take-home pay that such reforms could deliver. For many current formal workers, the effective tax burden would be reduced or not change much, as the reduced social contributions would only be partly substituted by increases in personal income taxes and possibly value-added taxes. For formal workers with relatively higher incomes, a more progressive income tax schedule would likely imply a higher tax burden than at present. In this sense, social protection reforms could go together with a tax reform to broaden the personal income tax base, and make the personal income taxes more progressive, as argued in Chapter 1, two long-standing challenges for Chile. Continuous efforts to improve the education and training system and to enhance labour and tax enforcement should complement improvements in formalisation incentives, among others.

Financing these reforms will require raising permanent additional resources of about 2.2% of GDP, which could be financed with the tax reform currently under discussion. This estimate is an upper bound, as the increased formalisation and growth, and resulting revenue collection that such a reform would deliver are not taken into account. This additional spending would bring benefits for social inclusion and growth, and given its low tax revenues by international standards, Chile has space to do this (see Chapter 1).

In many respects, the costs will be more of a political than an economic nature. The difficulties of finding the necessary political consensus for the reforms discussed in this chapter should not be underestimated. The political economy of the broad overhaul of existing institutions that Chile needs, together with the required fiscal reforms to secure additional revenues, is likely to be winded. However, Chile has demonstrated its capacity to implement deep reforms on many occasions, including the 2008 reform to the pension system or the 2016 educational reform. The experiences of the social unrest in late 2019 and the COVID-19 pandemic make social protection reforms a matter of urgency to strengthen social cohesion. The broad reform agenda implemented or discussed since the beginning of the current legislature in March 2022 testify to this urgency.

This chapter analyses the strengths and challenges of the current social protection system and reviews policy options to achieve universal coverage of basic social protection while boosting formal employment. The benefits of reforming social protection would be amplified by simultaneous policy action in other policy areas, including reforms to boost the structurally low and stagnant productivity of firms and the low access to high quality education and training, as discussed in Chapter 1 and in previous Economic Surveys (OECD, 2018[5]; OECD, 2021[6]).

The COVID-19 pandemic has exposed structural gaps in social protection coverage

After the 2019 social unrest, the COVID-19 deepened social gaps

Chile has made remarkable progress in reducing poverty over the last 30 years. Before the pandemic the poverty rate was one of the lowest in Latin America (Figure 2.1). Inequality has also declined, although much more modestly. Moreover, the decline in inequality over the last two decades is called into question when adopting more sophisticated ways to account for capital income and undistributed corporate profits, which are typically underreported in household surveys (Flores et al., 2019[7]; Larrañaga, Echecopar and Grau, 2021[8]). Economic vulnerability, defined as the share of the population at risk of falling into poverty, has also decreased considerably, at the same time as Chile's middle class expanded rapidly (World Bank, 2021[9]). Despite this progress, poverty and inequality remain high by OECD standards.

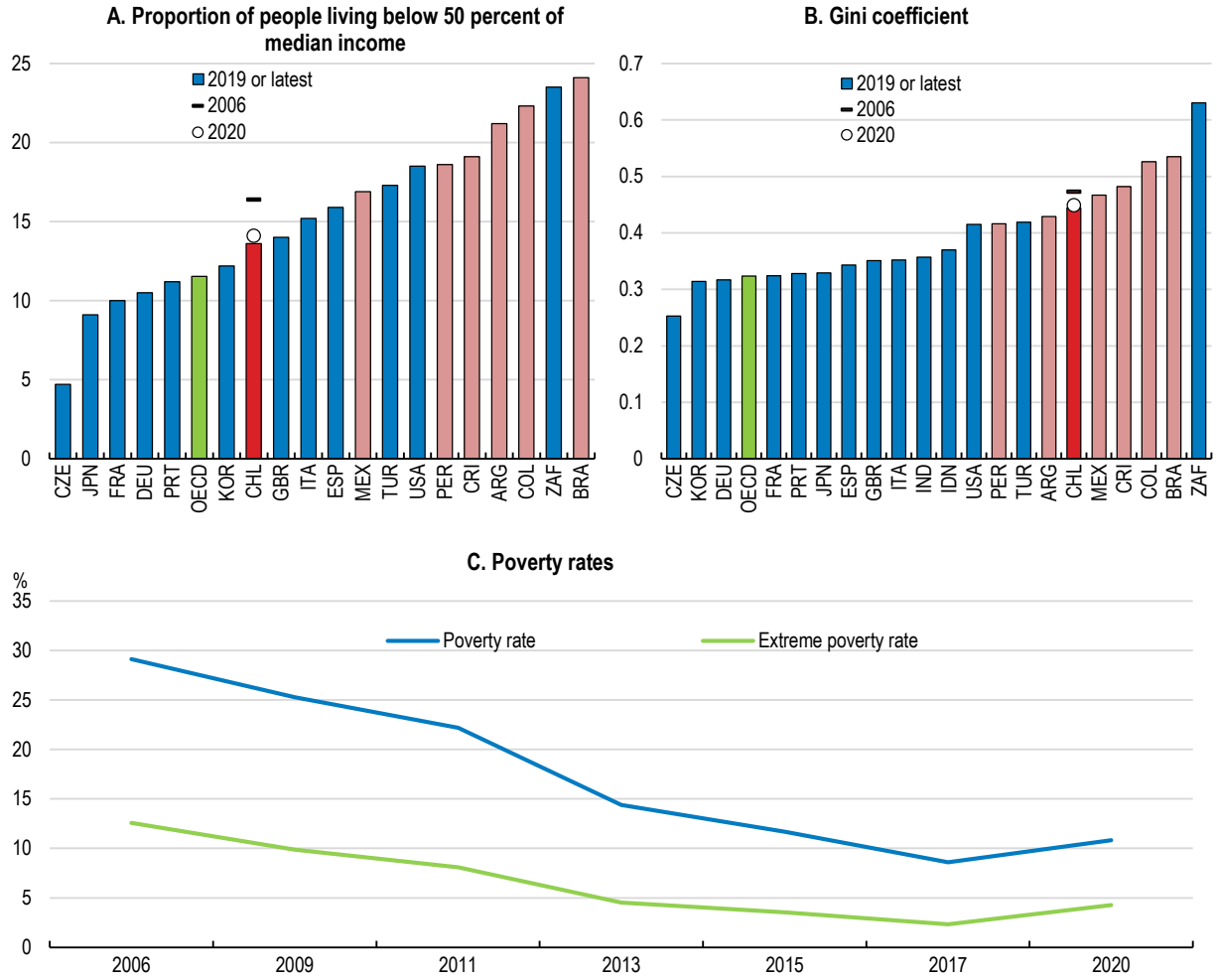
Economic growth was the main driver of the fast reductions in poverty and vulnerability (Ricci and Hadzi-Vaskov, 2021[10]). The end of the commodity boom in 2014 and the concomitant growth slowdown explain why progress on equity stalled. While social policy and the tax system contributed to the decline in poverty, they had little impact on inequality (Repetto, 2016[11]).The redistributive impact of direct transfers is high in relation to other countries in Latin America, but low compared to more advanced countries (Lustig, 2016[12]). In-kind transfers, particularly education and healthcare services, have also contributed substantially to the reduction of inequality and poverty in the last decades (Martinez-Aguilar, Fuchs and Ortiz-Juarez, 2017[13]).

The Covid-19 pandemic had a profound impact on lives and livelihoods, like in many other countries, increasing poverty from 8.6% in 2017 to 10.8% in 2020. Many of these newly poor households suffered steep income declines and 540,000 people fell into poverty. Inequality, as measured by the Gini coefficient, increased by 4 points during 2020. Massive losses of jobs and livelihoods, particularly among the vulnerable, were the main drivers of this increase in poverty and inequality in 2020 (Figure 2.2), despite a significant expansion of existing benefit programmes and the development of a new pandemic-related programme targeting informal workers that effectively mitigated the economic fallout of Covid-19.

Chile's labour market has significant structural gaps and inequalities

The strong socio-economic impact of the pandemic go back to pre-existing structural gaps and inequalities in the labour market, driven by a high share of informal jobs and unemployment that affect particularly the lowest part of the income distribution (Figure 2.5). One in every three workers in Chile has an informal job. Informality leaves workers, mainly in the lowest part of the income distribution, excluded from formal (contributory) social security – and hence inadequately protected by the social protection system (Box 2.1), with no access to training and unemployment insurance. Additionally, lower access of the least advantaged groups to digital technologies and education, longer commuting distances in public transportation, inability to quarantine due to lack of savings explain why these groups were disproportionately affected by the pandemic.

Figure 2.1. Poverty and inequality have increased during the first year of the COVID-19 pandemic



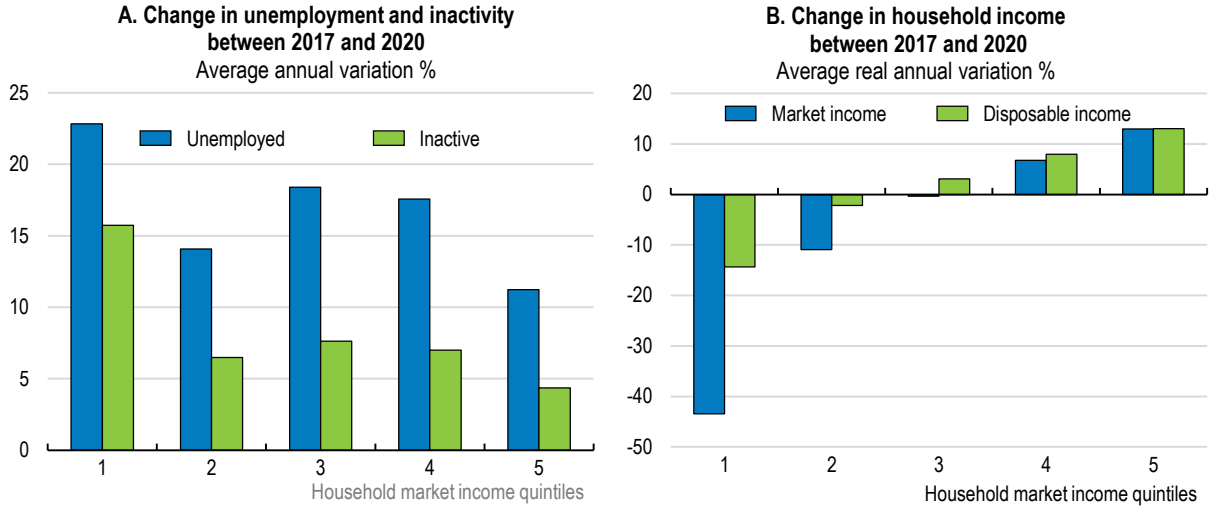
Note: In Panel A, poverty is defined as the share of people living in a household below the 50% of the median disposable household per capita income (or, in some cases, consumption expenditure). This poverty measure is different from the national definition of poverty by the Ministry of Social Development, which is used in Panel C. Gini index measures the extent to which the distribution of income after taxes and transfers (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. Panel C shows poverty using the national definition based on the calculation of the basic food consumption basket.
Source: World Bank, WDI; Ministerio de Desarrollo Social y Familia de Chile.

StatLink https://stat.link/rymuk5

Before the pandemic, the labour market was showing signs of deterioration, implying that workers faced the recession caused by the pandemic from a rather weak starting position. The unemployment rate increased from 6.1% in 2013 to 7.2% in 2019. Job quality also deteriorated during this period, with self-employment, which is mostly informal, growing more strongly (on average, at 3.8% per year), while salaried employment grew by less than half in the same period (1.6%). A high share of temporary jobs and high job turnover is another structural factor explaining the large impact of COVID-19 on the labour market (Figure 2.6), as often these workers do not fulfil the requirements to access the unemployment insurance system in case of dismissal. Additionally, many jobs created in the last five years prior to the pandemic were concentrated in low-productivity sectors with high rates of informality, such as construction, hotels and restaurants and retail. These sectors were precisely the most affected by the pandemic (Villanueva and Espinoza, 2021[14]). The social protests in 2019 did not have a significant impact on total employment, but they accelerated informal job creation with more than 100 000 workers falling into informality, leaving more workers without social protection when the pandemic unfolded.

Informal workers suffered the most from the economic fallout of the pandemic, as job losses among informal workers were twice as high as among formal workers. This marks a break with past recessions when informality used to cushion the decline in employment and acted as a countercyclical buffer (OECD, 2010[15]). During the pandemic, the lockdowns and mobility restrictions forced many informal workers to stay at home and leave the labour force. While informal workers saw a 3% decline in their median labour income in 2020, median labour income decreased by only 1% for formal workers (Figure 2.7). Given the nature of informality, stimulus policies in the form of credits, wage subsidies or furlough schemes generally failed to reach informal workers. Moreover, as informal workers have usually no access to savings or any type of social protection, they depended on government cash transfers. During 2020, these compensated only partially for their lost income (Busso et al., 2020[16]).

Figure 2.2. The loss of jobs and incomes led to an unequal social impact during the pandemic



Source: Casen 2020 and 2017, Ministerio de Desarrollo Social y Familia, Chile.

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Box 2.1. Informal employment in Chile

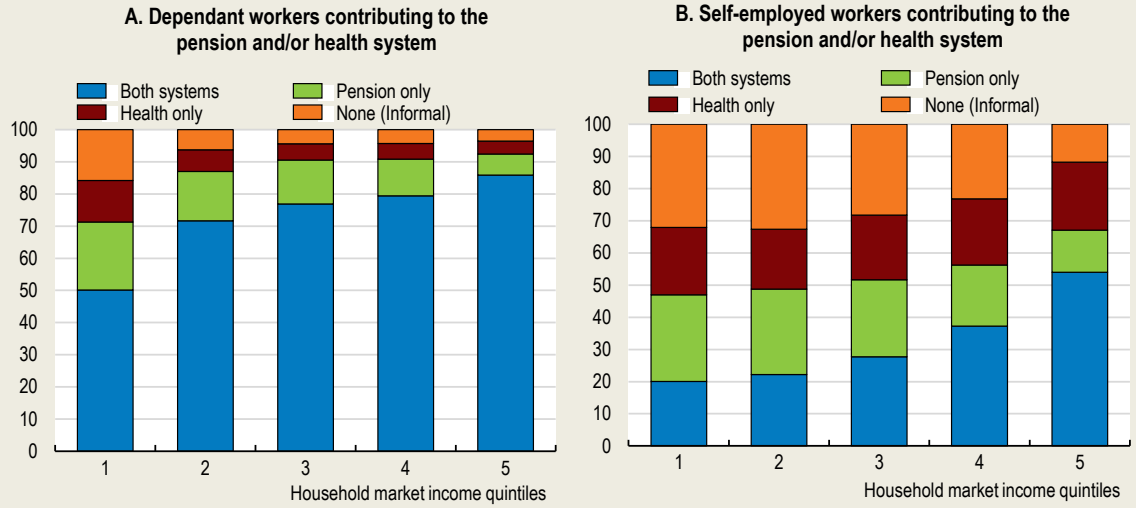
There is no unique international definition for informal employment. However, a generally accepted way to define it is jobs that are not taxed, registered by the government or that do not comply with labour regulations. This chapter defines informal employment as all types of workers not contributing to social security, i.e. the pension system or the health system. Although there is not a perfect correlation, when a worker or his/her employer pay pension contributions then they typically pay for health contributions and comply with employment regulations. Labour informality is not always illegal, as sometimes some types of workers are not obliged to contribute to the pension or health systems. This is the case for many self-employed workers. In Chile, contributions by self-employed workers that issue invoices became mandatory only in 2019. Businesses can also be informal by not being registered with the tax administration and without formal accounting, which is usually correlated with not paying social security contributions for their workers.

Chile has experienced a substantial reduction in its labour informality rate since 2010, with a fall from around 40% to around 30% of the total workforce in 2019. In comparison with other Latin American economies, this share is still comparatively low. Informality is higher among self-employed workers and among lower-income households (Figure 2.3). Informal workers tend to have lower and more unstable incomes. Many workers in Chile transit between formality and informality many times during their

professional careers (OECD, 2018[5]). This implies that some workers, even when they contribute for some time, usually do not fulfil the requirements to access unemployment insurance, nor are they able to save much for pensions.

Informal employment is highly correlated with a few socioeconomic characteristics. Most rural workers regularly hold informal jobs, as do young and old workers, and low-skilled workers (Figure 2.4). The share of informal workers is slightly larger among women than among men. However, there exists a low female employment rate (55% in 2021 against 61.4% in the average OECD country). The agricultural sector, retail, hotels and restaurants and the construction sector concentrate many informal workers. Poverty rates are higher among workers in informal employment.

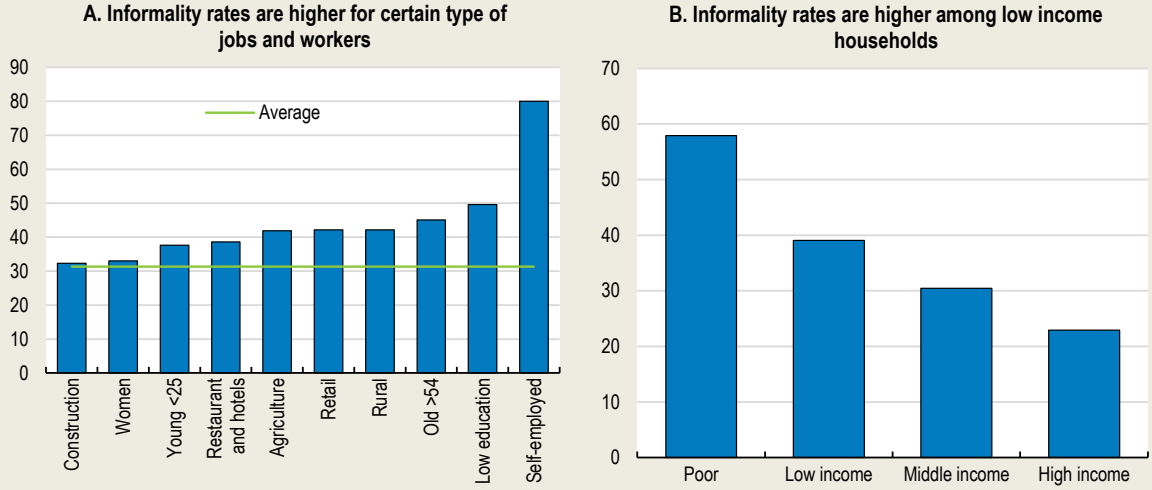
Figure 2.3. Informality is larger among low-income and self-employed workers



Note: CASEN 2017 is used as 2017 is the last pre-pandemic year available for household surveys. Year 2020 is an atypical year affected by the pandemic.
Source: (Morales and Olate, 2021[17]).

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Figure 2.4. Informality rates vary strongly with socioeconomic characteristics



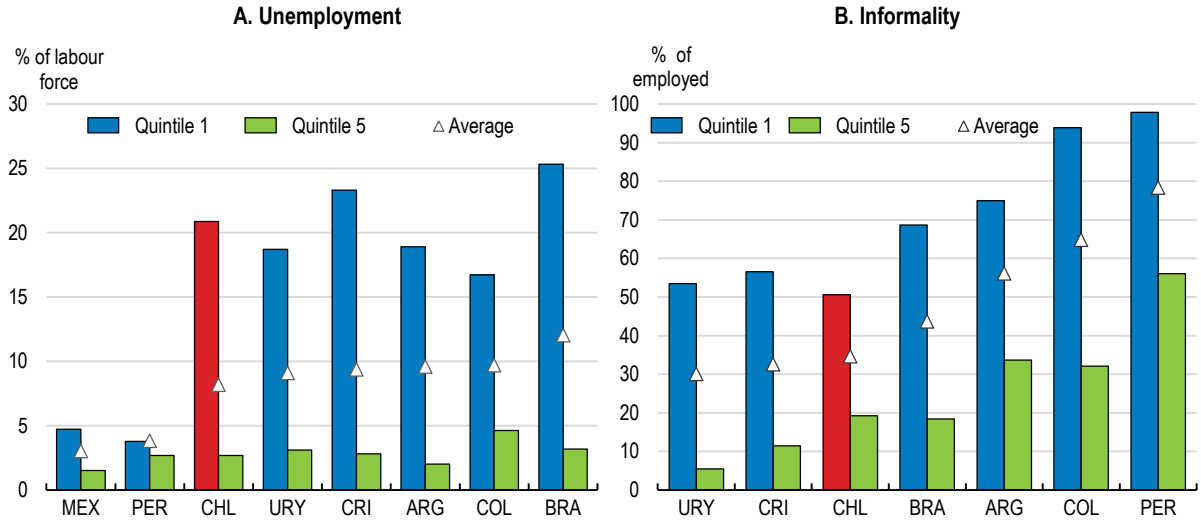
Note: Year 2017. Informality is defined as those not contributing to the pension system. In panel B: poor are those individuals in households with per household income below the poverty line; the low-income class comprises individuals in households with household income between the poverty line and 2.1 poverty lines; the middle-income class comprises individuals in households with household income between 2.1 and 3.3 poverty lines, the upper-income are individuals in households with income of more 5.6 poverty lines.
Source: OECD calculations based on Households Surveys, Casen 2017.

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Chile has also high levels of business informality among micro and small firms. More than half of microenterprises were informal, not registered with the tax administration and without formal accounting in 2018, according to the microenterprises survey of the national statistical institute. This is highly correlated with low compliance with hiring formal workers, sanitary standards, low implementation of formal accounting and tax declaration and payment. Most informal jobs are concentrated in small firms with a high incidence of low skill and low-productivity occupations. Female micro entrepreneurs are more prevalent in the informal sector than men (57.3%; as compared to 42.8%) and their companies are significantly less profitable. About 70% of these women earn less than the Chilean minimum wage ***(OECD, 2021[18])***. Around 17% of economic activity in Chile takes place in the informal sector ***(Medina and Schneider, 2019[19])***. The informal sector includes all economic activities that are hidden from official authorities for monetary, regulatory, and institutional reasons, that is avoiding paying taxes and all social security contributions, governmental bureaucracy or the burden of regulatory framework, corruption law, the quality of political institutions and weak rule of law, reflecting mostly legal economic and productive activities that, if recorded, would contribute to national GDP.

Digital transformation could intensify existing contributory gaps in the pensions and other social protection schemes because of more frequent job changes, more unemployment spells or the inherent nature of the digital jobs, such as digital platforms.

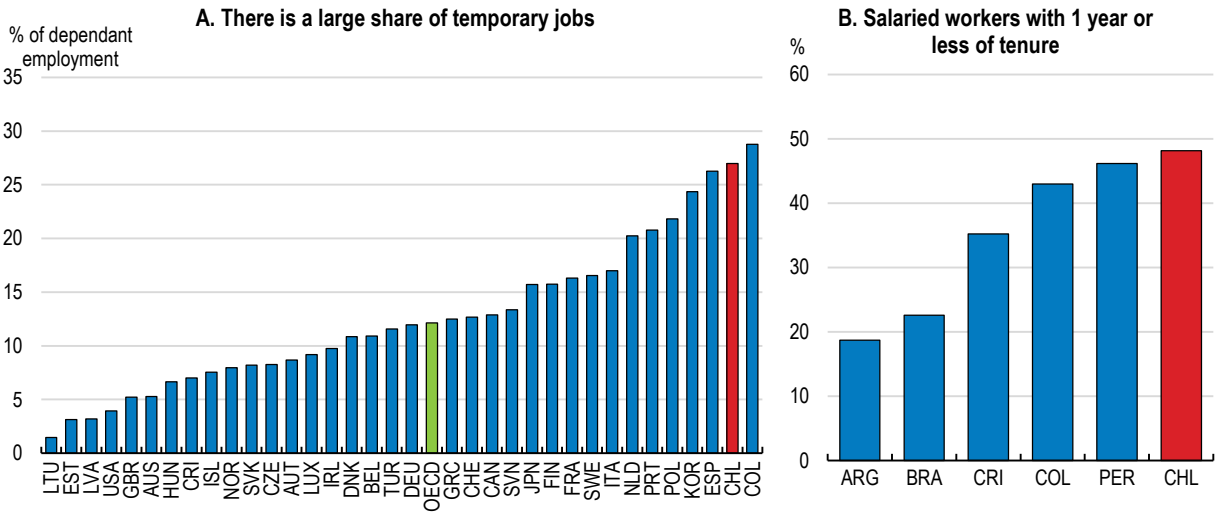
Figure 2.5. Informality and unemployment are concentrated among the vulnerable



Note: Year 2019. Informal workers are defined as those not paying pension contributions.
Source: IADB Sims Database.

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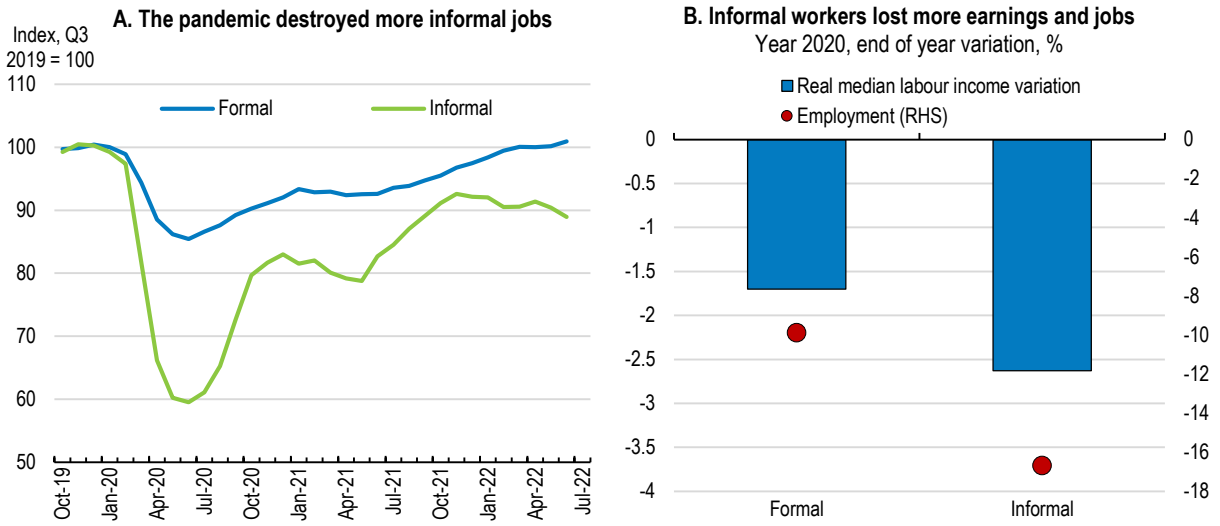
Figure 2.6. Rotation in the labour market is high limiting access to social security



Note:Data refer to 2019 in panels A and B, except for AUS and USA, for which the data refer to 2017.
Source: OECD labour force statistics and IADB Sims Database.

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Figure 2.7. Informal workers suffered the most from the COVID-19 crisis

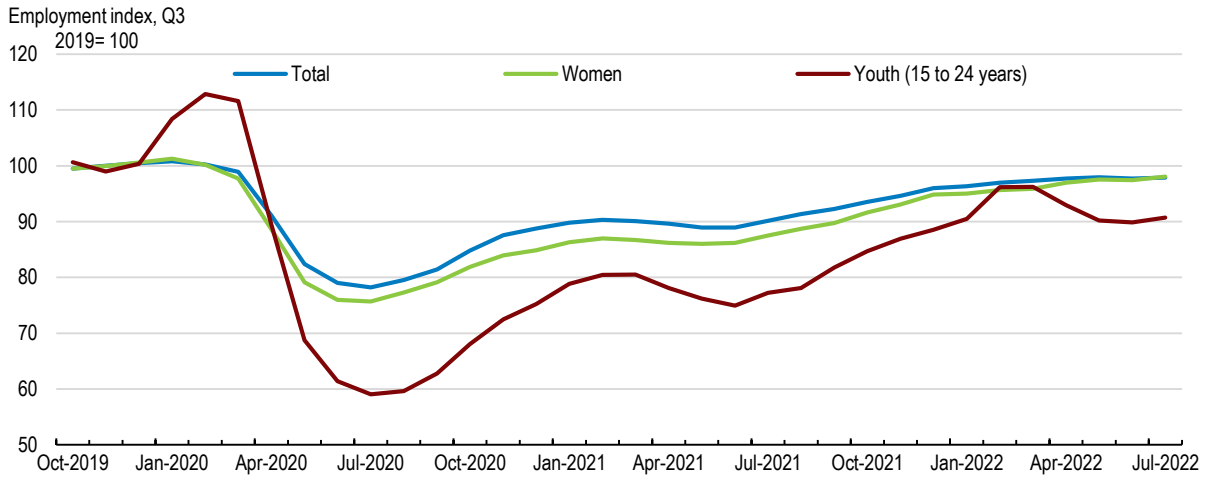


Source: OECD calculations using labour forces surveys, ENE and ESI microdata, INE.

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Women and youth were more affected by the pandemic than men and older workers (Figure 2.8). Female labour force participation saw an unprecedented reduction during 2020. Growth in female labour force participation, which was already below the OECD country average, was set back by a decade by the pandemic, and as the economy rebounds, the recovery has been slower than for men. This is, at least partly, explained by school closures, which lasted for around 20 weeks in 2020, one of the longest closures in the region. Youths are more likely to have informal jobs or fixed term contracts and are hence less protected by the social security system. Moreover, with the economic and social effects of the COVID-19 pandemic, young Chileans have been experiencing growing concerns over their future income, mental health, education, employment, and ability to partake in public life. OECD evidence suggests that deteriorating opportunities for young people due to the COVID-19 crisis risk leaving long-lasting scars on their trust in government and satisfaction with democracy (OECD, 2022[20]).

Figure 2.8. Women and youth suffered more during the COVID-19 pandemic



Source: Labour force statistics, INE.

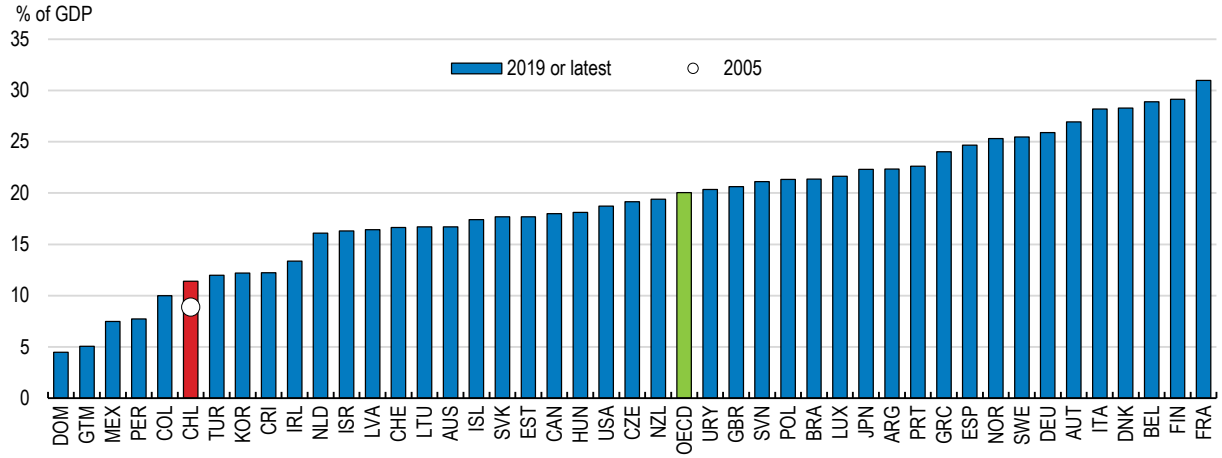
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The social protection system is comprehensive but has a fragmented design

Chile has developed one of the most comprehensive social protection systems in Latin America (Box 2.2). Beginning in the early 2000s, a series of policy reforms expanded access to public services and income support programmes. This brought health, social assistance and, to a lesser degree and only more recently, education, closer towards universal coverage. In 2020 there were 469 social assistance programmes supervised by 12 ministries according to the Ministry of Social Development and the Family (MDSF) and the Budget Office (DIPRES). Although social spending has constantly increased over the last decade, at 11.4% of GDP it remains low compared to the OECD average in 2019 (Figure 2.9). Around 40% of social spending is allocated to the social protection system, according to the Budget Office. 50% of this social protection spending is allocated to pensions and less than 13% to social assistance programmes supporting the poor and the vulnerable.

Access to social protection is mostly determined by the labour market status of the worker. The first component are social security benefits associated with formal work. These are financed mostly from employee and employer contributions that are proportional to worker salaries or wages (Table 2.1). Government top-ups complement workers' or firms' contributions to increase benefits of these formal workers. The second component of the social protection system is the social assistance system, which was created to provide insurance to those left out of the contributory social security system and is generally financed from general tax revenues. In this component, Chile has managed to achieve universal access to healthcare and pensions.

Figure 2.9. Public social spending is low



Note: Year 2019. Social expenditure comprises old-age, survivor, incapacity-related, health, family, unemployment, housing, active labour market support and other social policy areas. It comprises cash benefits, direct in-kind provision of goods and services, and tax breaks with social purposes.
Source: OECD Social expenditure database; CEPAL.

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Table 2.1. Contributions to the social protection system in Chile

	Dependent worker		Self-employed
	Paid by the worker	Paid by the employer	
Pensions	10%		10%
Disability and Survivorship insurance		1.85%	1.85%
Pension fund manager administration fee (market average)	1.16%		1.16%
Health (private/public)	7%		7%
Work-related accidents and occupational diseases insurance		0.95%	0.95%
Unemployment insurance: open-ended [fixed-term] contracts	0.6% [0%]	2.4% [3%]	-
Medical leave for working parents of children with a serious health condition fund		0.03%	0.03%
Total [fixed-term]	18.76% [18.16%]	5.23% [5.83%]	20.99%

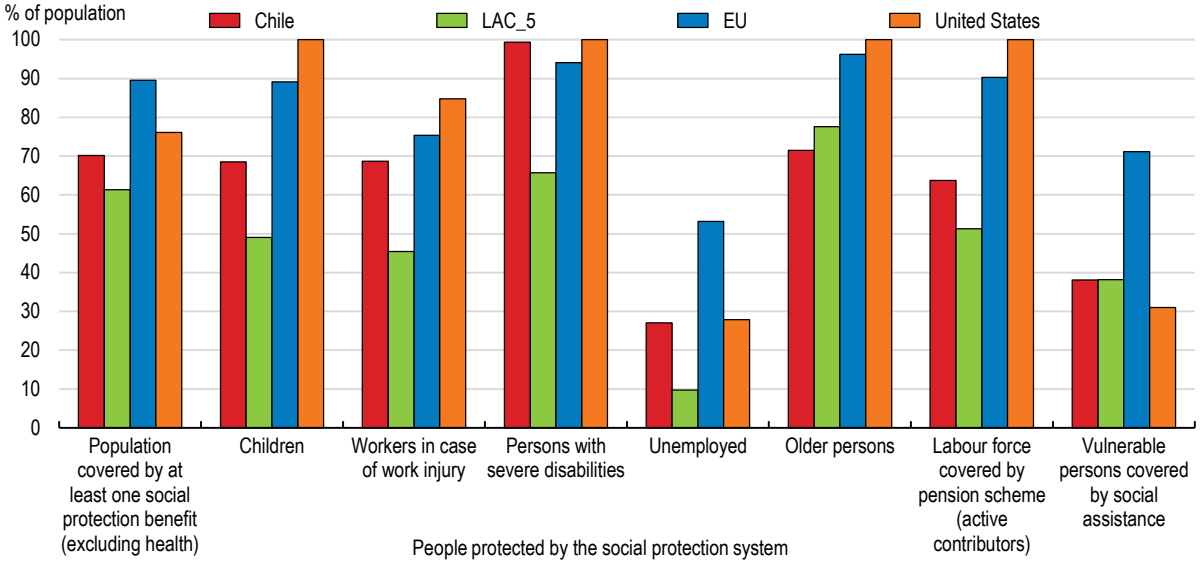
Note: For the self-employed workers these numbers do not apply completely as only in 2019 became mandatory the contribution for self-employed workers and will only cover 100% of taxable income in 2027.
Source: OECD calculations.

The Chilean social protection system is characterised by a large participation of private actors, such as private pension and unemployment funds, based on savings in individual accounts. The social assistance system and some other public social policies, such as education, health and housing, are targeted to the most poor households and are generally of lower quality than the more costly private services accessed by middle-income and high-income households (Repetto, 2016[11]).

The result of this framework is a segmentation of the labour force into two categories: formal workers, covered by contributory programmes and minimum wage regulations, and informal workers, who are covered by universal access to healthcare and the universal guaranteed minimum pension and some of which have access to cash transfer assistance programmes. Many informal workers, however, have incomes above the poverty line, which generally precludes them from accessing cash transfer benefits or unemployment insurance. Informal workers have also less access to training and more unstable earnings. This duality has led to a low coverage of social protection (Figure 2.10), particularly among certain groups such as the unemployed, although social protection coverage is higher than in other Latin American countries.

The fragmented social protection system not only creates incentives for informality that foster inequality, but contributes to low productivity growth (Levy and Schady, 2013[21]; Levy and Maldonado, 2021[22]). When contributory benefits are not fully valued by workers, they tend to act as an implicit tax on formal employment. At the same time, non-contributory benefits can act as a subsidy to informality when they are perceived as similar to those enjoyed by formal workers, who pay for them. At the same time, firms tend to stay inefficiently small as they attempt to fly below the radar of labour market and tax inspections (Ulyssea, 2020[23]). Additionally, informality hinders worker mobility, productivity-enhancing resource reallocation and workers' access to quality jobs and training (López-Calva and Lustig, 2010[24]; OECD, 2018[25]; OECD, 2019[26]).

Figure 2.10. Coverage of the social protection system remains low



Note: Year 2020 or latest available year. Vulnerable people are defined as all children plus adults not covered by contributory benefits and people above retirement age not receiving contributory benefits (pensions). LAC5 is the unweighted average of Argentina, Brazil, Colombia, Costa Rica and Mexico.
Source: ILO, World Social Protection Database, based on the SSI; ILOSTAT; national source.

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Box 2.2. The social protection system in Chile

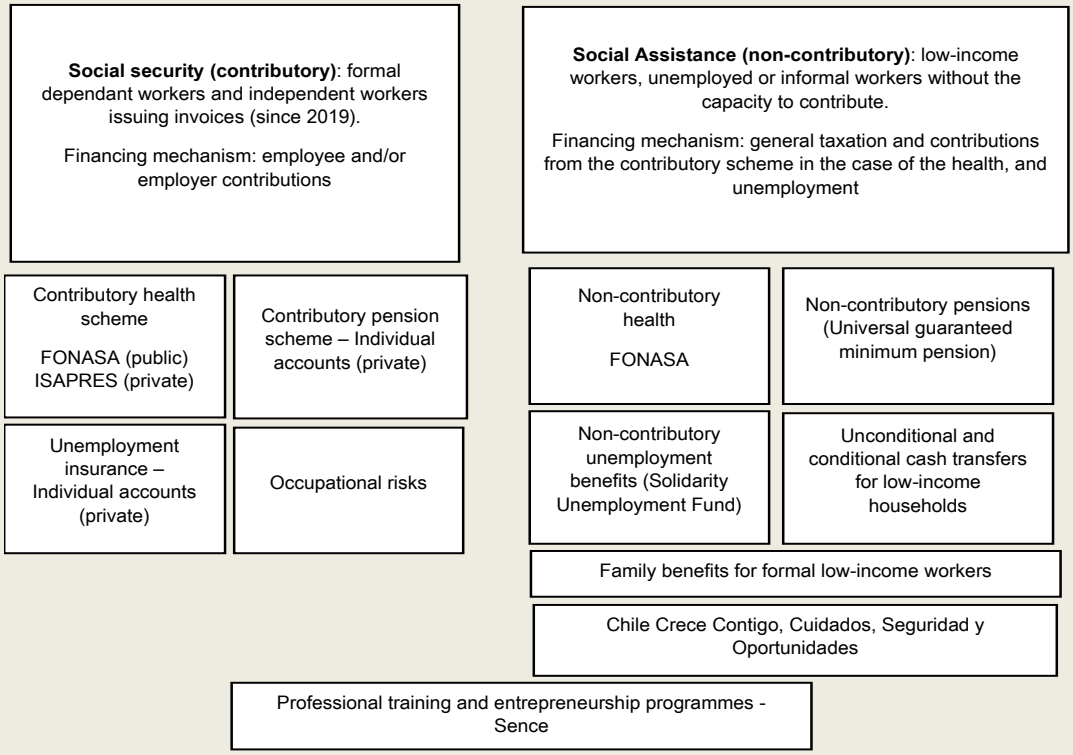
The social protection system combines social insurance (contributory schemes) and social assistance system (non-contributory schemes).

The social security system comprises the contributory schemes in health, pension, disability and unemployment insurance, occupational risk coverage and family benefits (Figure 2.11). Workers covered by this system are also subject to regulations on employment protection and minimum wages. The level of mandatory contributions is the same for employees, self-employed or own-account workers, and amounts to around 22% of earnings. Only around 5 percentage points of these contributions are paid by the employer, which is a major difference in relation to most social security systems throughout the world. Self-employed, entrepreneurs and non-remunerated workers are not required to contribute to social security. Only in 2019 were contributions by self-employed workers who issue invoices made mandatory. The collection is done through the tax system as these workers are subject to VAT payments. The government also contributes to this system to ensure more adequate benefits.

The social assistance system or non-contributory schemes, financed through general taxation, includes a health scheme for low-income households; a non-contributory pension scheme and conditional cash

transfer programmes (such as *Subsidio Único Familiar* and *Ingreso Ético Familiar*). Other welfare programmes include *Chile Crece Contigo* (Chile grows with you), an early childhood development subsystem; *Seguridades y Oportunidades* (Securities and Opportunities), a subsystem that coordinates the delivery of a range of social services and benefits provided by different government institutions to improve the wellbeing and social cohesion among Chile's poorest vulnerable families and other specific priority groups; and *Cuidados* (Care), an inclusion subsystem providing protection to households with elderly or family members with any disability. The national training institution (*Servicio Nacional de Capacitación y Empleo*, SENCE) offers vocational and professional training and employment subsidies to vulnerable and poor households.

Figure 2.11. The structure of social protection in Chile



Source: OECD Secretariat.

Strengthening social assistance

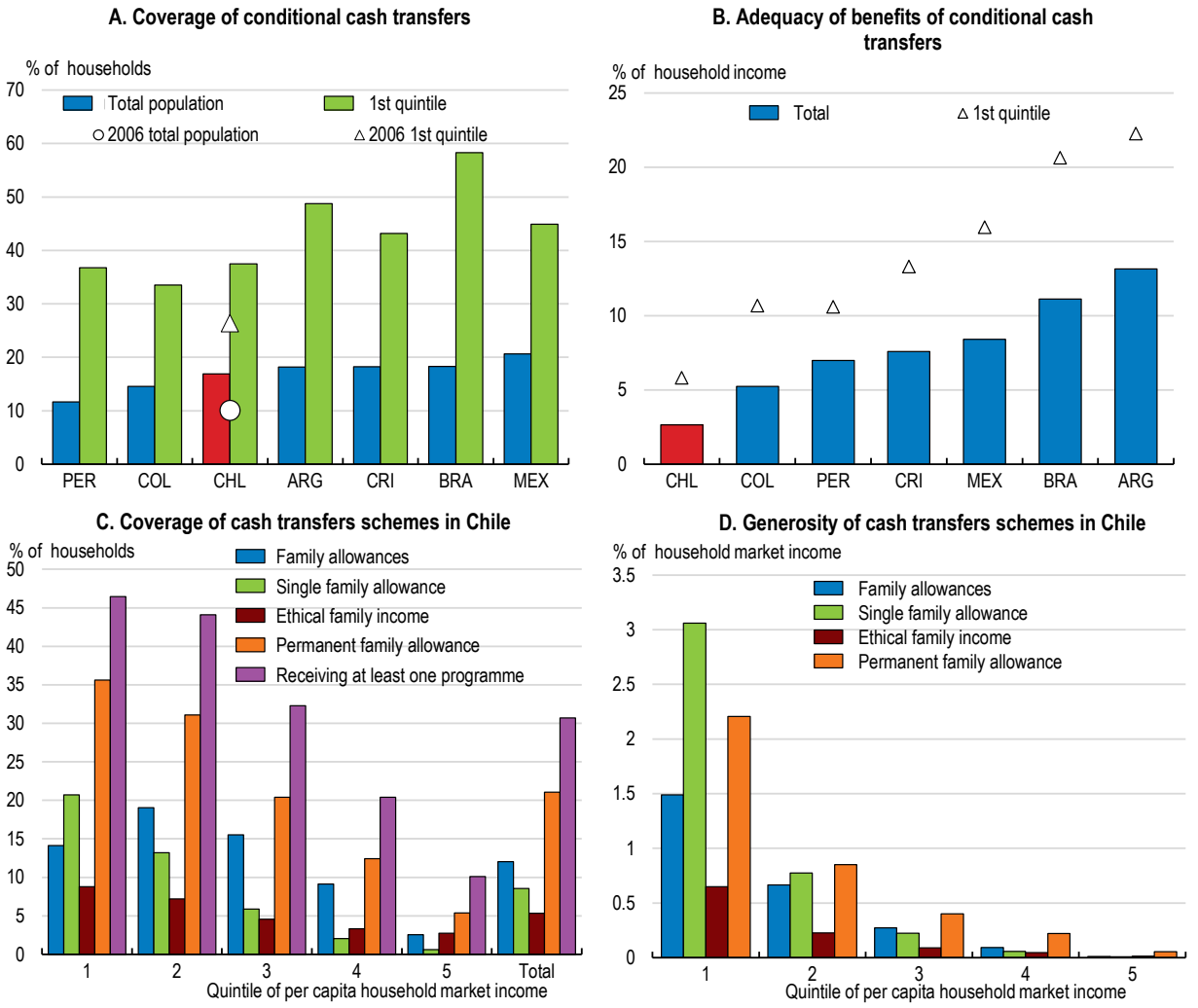
Social assistance programmes are fragmented, have low coverage and benefit levels

Chile has performed better than other countries in Latin America on social programmes, with fighting poverty being the main focus. The number of families receiving income-support has increased in the last two decades to cover different needs during the life-cycle (for example children, the elderly, the disabled, the unemployed, women, youth). Although there are longstanding social programmes supporting low-income formal workers, social assistance programmes mostly aim at protecting those left behind by social security schemes, typically informal workers in poor households.

While cash transfer programmes have contributed to reduce poverty (Cecchini, Villatoro and Mancero, 2021[27]; Focus, 2016[28]) and coverage has increased in the last decades, the main cash transfer

programmes (Box 2.3) have not reached all those in need and benefits are low even in regional comparison (Figure 2.12). Coverage reached 30.7% in 2017 for the main social assistance programmes, but only 51% of households in poverty were receiving at least one type of income support according to the household survey. Moreover, some households in the upper part of the income distribution were receiving cash transfers, to the detriment of public spending efficiency. Benefits levels are generally low (Figure 2.12, Panel B). On average, those in the first quintile of the income distribution received cash transfers for 9% of household market income, limiting the impact on poverty reduction.

Figure 2.12. Cash transfers programmes leave many poor households without any support



Note: Data are for 2019, except 2017 for Chile. Family allowances=Asignaciones familiares, Single family allowance=Subsidio Único Familiar, Ethical Family Income=Ingreso Ético Familiar; Permanent family allowance=Aporte Familiar Permanente.
Source: OECD calculations based on CASEN 2017 and World Bank, Atlas of Social Protection: Indicators of Resilience and Equity (ASPIRE).

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Box 2.3. The main cash transfer programmes in Chile

More than 95% of social assistance spending to reduce poverty and vulnerability is channelled through cash transfers programmes, while other programmes promote entrepreneurship, training or labour intermediation. Social assistance programmes are mainly family-oriented cash benefits (Table 2.2), which include mean-tested family allowances for formal workers (*Asignación Familiar*), a mean-tested conditional family cash transfer for low-income informal workers (*Subsidio Unico Familiar*), and a social assistance programme offering conditional and unconditional cash transfers for families and children in extreme poverty (*Ingreso Ético Familiar*). Other unconditional cash transfers are offered to all cash transfers recipients (such as *Aporte Familiar Permanente*).

Table 2.2. The main cash transfers programmes in Chile

	Target population	Benefit	Duration of the programme	Beneficiaries	Fiscal cost, % of GDP in 2019
Family allowances - *Asignación familiar* – AF	Low-income formal workers (earning less than 2.5 minimum wages) with children or other dependent family members	Between 2% and 11% of the poverty line per dependent family according to household income.	Automatic access and continuity always that conditions are met.	243 300 workers	0.03%
Single family allowance - *Subsidio Único Familiar* (SUF)	Informal workers (not receiving family allowances) with children under 18 years of age, pregnant women and people with disabilities belonging to the 60% most socio-economically vulnerable	Conditional cash transfer of equal benefit amount per dependent family member, conditional on children's schooling and health. CLP 12 000 monthly per child (USD 17.6, 10% of the poverty line).	Up to three years.	2 million workers	0.16%
Ethical Family Income - *Ingreso Ético Familiar* (IEF) from *Seguridad y Oportunidades* system	- Families in extreme poverty - People aged 65 and over who live in poverty - People living on the street - Minors whose responsible adult is deprived of liberty. Families participating in the programme can also receive other social assistance benefits, including the SUF	Contains two blocks: one of intervention and the other of cash transfers. One unconditional cash transfer of the 85% of the difference between the family income and the extreme poverty line. The maximum benefit received monthly is USD 15.7 (9% of the poverty line). It is supplemented by conditional cash transfers related to children's schooling and health, an employment subsidy to promote female formal employment, and conditional cash transfers rewarding school achievements.	Time-limited graduation scheme: up to 24 months receiving cash transfers 48 months for the women's work subsidy.	101,900 people	0.02%
Permanent family allowance - *Aporte Familiar Permanente* (AFP)	Low income households receiving one of the benefits above	Once a year unconditional cash transfer of CLP 49 000 for dependent family member (25% of the poverty line)	Automatic access and continuity always that conditions are met.	1.6 million workers	0.08%
Total					**0.3% of GDP**

Note: The programmes in this table represented 80% of income support of households on average of total income-support in 2017. Other benefits are related to old-age, incapacity, and the water subsidy.
Source: OECD elaboration based on DIPRES, Cepal, ChileAtiende, Ministerio de Desarrollo Social y Familia, IPS, SUCESO.

The *Ingreso Etico Familiar* programme tends to bring families closer to the poverty line rather than helping them to overcome poverty due to its focus on families living in extreme poverty and the low

benefit levels (Fernández and Calcagni, 2015[29]). Moreover, although the programme' progressivity is high, its redistributive impact is limited (Amarante and Brun, 2018[30]). The impact of this programme on education attainment is also mixed (Henoch and Troncoso, 2013[31]). The cash transfer linked to school attainment (*Bono por Logro Escolar*) has been harshly criticized as it does not contribute to poverty reduction and the fact that being among the top of the class does not depend exclusively on the effort of the students, and it puts usually more pressure on the women of the household (MDSF, 2021[32]).

Evidence on the impact of social programmes on labour force participation and informality is mixed with some studies showing no impact and others small positive effects (Galasso, 2011[33]; Larrañaga and Contreras, 2010[34]; UDD, 2014[35]; Focus, 2016[28]).

Cash transfer programmes are fragmented, with weak coordination among different managing institutions and a lack of consistency with regards to eligibility criteria. Over the years, increased coverage has mostly been achieved by creating new benefits operating alongside existing ones (World Bank, 2021[9]). Insufficient information about the eligibility criteria and available benefits have reduced benefit take-up among low-income families (Fernández and Calcagni, 2015[29]).

Enhancing regular monitoring and evaluation of social programmes would support social spending efficiency. Information on the performance and beneficiaries of social assistance is still incipient, as are evaluations of their results (Hernando and Ross, 2017[36]). There have been significant recent efforts to improve the monitoring and evaluation of social programmes. There is still scope for analysing the systemic relevance and effectiveness of the different programmes more regularly and checking for duplications and overlap.

The COVID-19 pandemic provides important lessons for social policy

Chile invested more than most other Latin American country in economic and social relief to address the crisis. Spending in social emergency programmes was stepped up by 1.4% of GDP in 2020 and by another 6.5% of GDP in 2021. Social assistance policies included a series of additional emergency cash transfers through the pre-existing social assistance programmes and a new programme (Emergency Family Income, IFE) (Table 2.3). By December 2021, total spending on direct transfers reached 10% of GDP, with 65% of that spent on the new cash transfer programme. Chile is second only to Brazil in Latin America when it comes to the breadth and sufficiency of its cash-transfer response to Covid-19 during 2020 and a clear leader during 2021, even relative to the ten most advanced countries (IMF, 2021[37]).

Table 2.3. The COVID-19 pandemic induced a comprehensive income support response

	Date	Beneficiaries	Benefit levels	Fiscal cost, % GDP
Bono Covid	April 2020	Beneficiaries of the SUF and the SSyOO, and informal workers in the poorest 60% of households according to the Household Social Registry, and who do not benefit from any other social assistance programmes	CLP 50 000 per household, equivalent to 20% of the poverty line in an average household.	0.07%
Ingreso Familiar de Emergenia (IFE)	May - October 2020	Families belonging to the 60% most vulnerable according to the Household Social Registry, with informal incomes – 4.9 million people (1.9 million households)		1.3%
Bono clase Media 2020	August 2020	All workers who before the pandemic had formal incomes equal to or greater than CLP 400 000 and less than or equal to CLP 2 million and have experienced a 30% reduction in these incomes – 1.7 million beneficiaries.	CLP 500 000	0.3%
Bono Covid Navidad	December 2020	Same as IFE (Only for departments in confinement)	CLP 55 000	0.1%
Ingreso Familiar de Emergencia (IFE)	January - March 2021	Only for those departments in confinement		0.4%

Bono Clase Media 2021	April 2021	Workers with formal incomes between the minimum wage and CLP 408 125 with no income reduction requirement. Workers with formal incomes between CLP 408 125 and CLP 2 million with an income drop of at least 20%. 1.9 million beneficiaries	CLP 500 000.	0.4%
Broaden IFE	April - May 2021	80% of most vulnerable households. Coverage is extender to households with other incomes, in which case the IFE complements incomes.	CLP 100 000 per person, 80% of the poverty line	1.6%
Universal IFE	June - November 2021	100% of Household Social Registry with household income per capita below CLP 800 000 - 7,2 million households (16,7 million people)	Household with 4 members receives CLP 500 000, 1.5 times the poverty line	6.2%

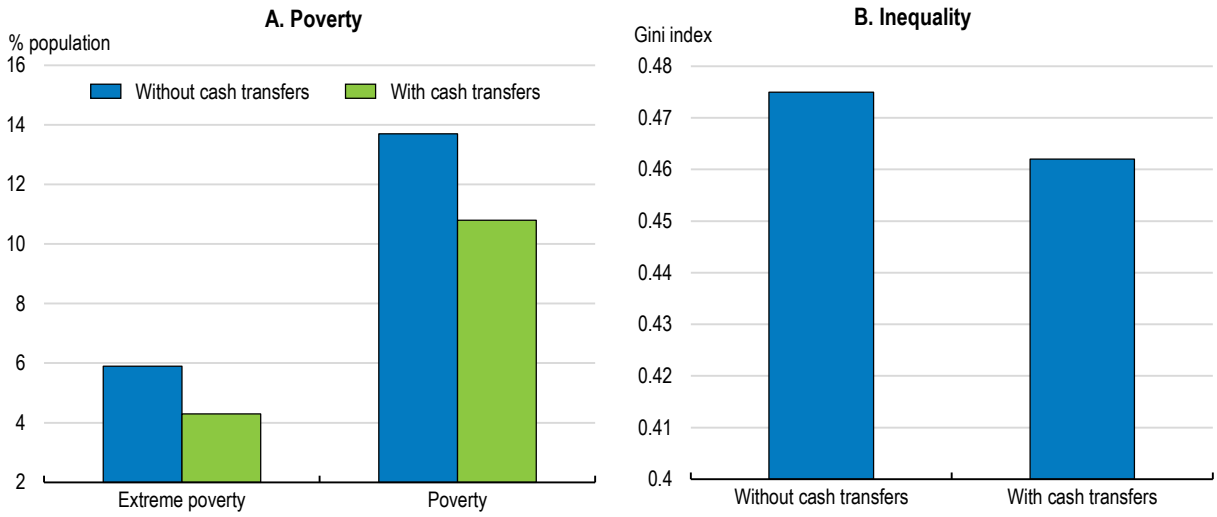
Source: Secretariat using different sources of data including Ministry of Finance reports https://reporte.hacienda.cl/

Cash transfers were well-targeted to the most vulnerable households in 2020 and managed to contain increases in poverty and inequality (Figure 2.13). However, cash transfers did not reach all those in need and failed to compensate for the fall in labour incomes (Figure 2.14), particularly among informal workers and vulnerable and middle-income households (CNEP, 2022[38]).

One clear lesson from the year 2020 is that more systematic measures to protect the economic security of the vulnerable population are needed. The initial implementation delay limited the ability to provide support in the early months of the crisis. Many workers received insufficient incomes or none at all during the first two months of the crisis. This delay also led to pressures on authorities to increase eligibility criteria and benefits during 2021, although the labour market was already recovering. This eventually led to an overcompensation of labour income losses, albeit too late (Figure 2.14). In addition, Congress introduced three constitutional reform bills over 2020-2021 that allowed all workers with positive balances in individual pension accounts to withdraw part of their pension funds overcompensating for the loss of incomes (Figure 2.15). These measures were not well targeted as they were not based on individuals' specific and exceptional circumstances (OECD, 2020[39]), benefiting mostly the upper quintiles of the income distribution (Barrero et al., 2020[40]).

Figure 2.13. Emergency cash transfers mitigated the COVID-19 impact on poverty and inequality

Year 2020

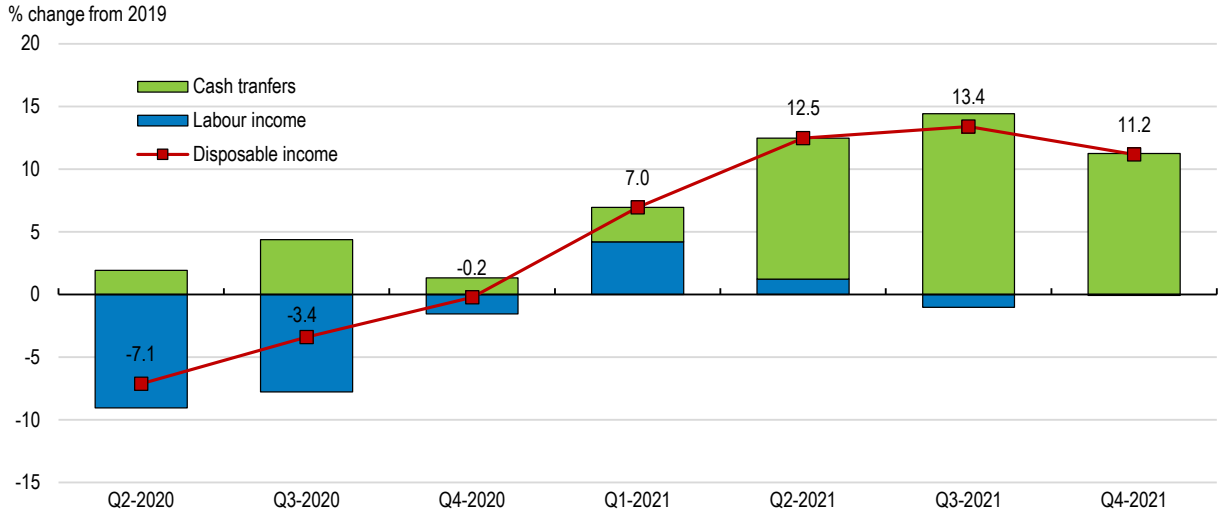


Source: (MDSF, 2021[41]).

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Overall, the large income support substantially mitigated poverty and inequality. Poverty was almost eliminated in 2021, mainly due to the rollout of the universal cash transfer programme (*Ingreso Familiar de Emergencia*, IFE). Inequality, as measured by the Gini coefficient, also dropped from 0.45 in 2020 to 0.39 in 2021. This improvement is likely to be temporary, as poverty (measured at USD 5.5 a day) and inequality are expected to increase to above pre-pandemic levels with the end of emergency transfers and the challenging macroeconomic conditions in 2022 (World Bank, 2022[42]).

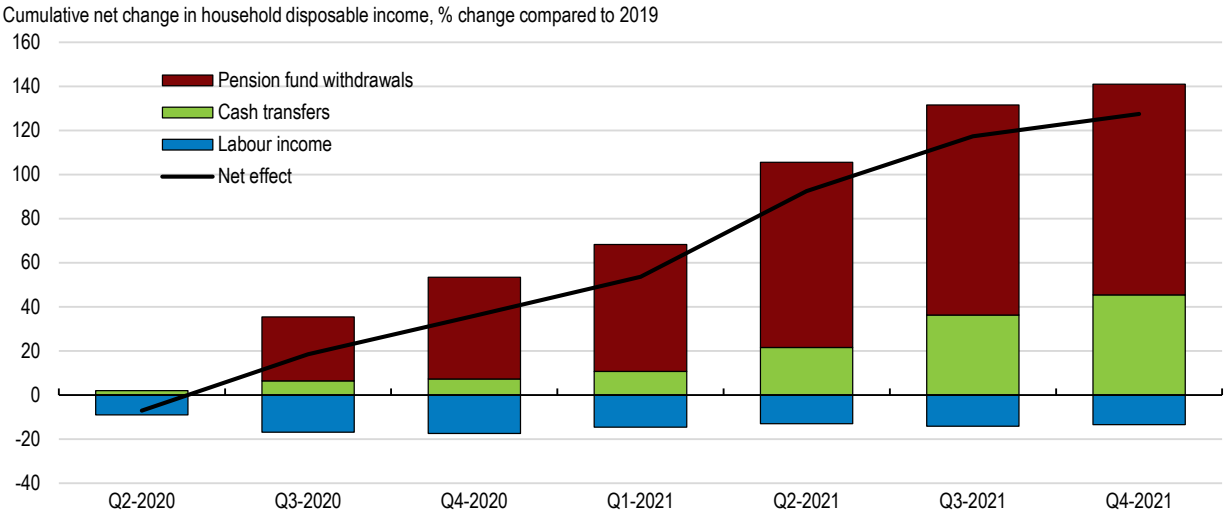
Figure 2.14. Emergency cash transfers mitigated income losses during the worst of the pandemic



Note: Changes in labour income relative to the same quarter of 2019 and based on total disposable income for that period. Estimates income changes for 21.III and 21.IV based on the central scenario of the Central Bank IPOM December 2021, while the amounts of income support are based on what is committed for quarters 21.III and 21.IV. Source: (CNEP, 2022[38]).

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Figure 2.15. Pension funds withdrawals overcompensated for income losses during the pandemic



Note: Accumulated changes in labour income relative to the same quarter of 2019 and based on total disposable income for that period. Estimates show income changes for 21.III and 21.IV based on the central scenario of the Central Bank IPOM December 2021, while the amounts of income support are based on what is committed for quarters 21.III and 21.IV.
Source: (CNEP, 2022[38]).

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A single cash transfer programme for the vulnerable

The experience of the COVID-19 pandemic calls for a more comprehensive, flexible, and sustainable social protection system. Protection against poverty and income losses could be improved by unifying and integrating existing cash transfers into a single programme to fight poverty. One option would be to establish a single cash transfer for those aged below 65 living in poverty population that would top up incomes so as to guarantee a certain minimum income to all. This programme could also provide a backstop to those who lose their livelihoods temporarily in the case of dismissal. Unifying all income support into one programme would simplify the delivery of social benefits, reduce bureaucracy, increase transparency and improve spending efficiency.

In practice, this proposed benefit would function as a periodic cash transfer to every adult below 65 living in a poor or vulnerable household. The design of this cash benefit could be based on the experience of the successful *Ingreso Ético Familiar* and maintain its conditionalities on education and health. The size of the transfer would be contingent on household income before transfers (both from formal and informal jobs) and their assets. When children are part of the household, the cash transfer could be conditional on school attendance and health check-ups, as in the *Ingreso Ético Familiar* or *Subsidio Familiar Único* programme. This has proven effective in helping families to exit poverty. The cash transfer would decrease gradually as the household income increases, until eventually reaching zero. That would set the scheme apart from the existing cash transfers schemes that provide a fix amount of money to every household. Only *Ingreso Ético Familiar* takes the distance of household income from the poverty line into account. The new scheme would be financed from general tax revenues. The proposed scheme is different from a Universal Basic Income, which grants an identical amount to every citizen, regardless of their income (Box 2.4). A Universal Basic income would not be fiscally viable in Chile, nor would it be effective to fight poverty.

Box 2.4. The pros and cons of a Universal Basic Income

A universal basic income (UBI) is an unconditional cash transfer granted at regular intervals to all residents, regardless of their wealth, earnings or employment status. The main advantage of such a programme is that it is simple to implement as no conditions or requirements are applied.

The main disadvantage of an UBI is that it could be extremely costly. An unconditional payment to everyone at meaningful but fiscally realistic levels would require strong tax rises and possibly reductions in existing benefits, and would not often be an effective tool for reducing income poverty (OECD, 2017[43]). Some disadvantaged groups would lose out when existing benefits (usually all other social programmes) are replaced by a universal basic income, illustrating the downsides of social protection without any form of targeting at all.

As in most countries, the Universal Basic Income is fiscally unviable in Chile and can be controversial by guaranteeing transfers to high-income earners. Setting the monetary transfer to the extreme poverty line to every household member to assure that the most basic needs of all Chileans are satisfied even if no other income is available, would have a cost of 9.9% of GDP in 2017. This UBI level still would leave many households in poverty, especially those at old-age not receiving any pensions or the unemployed or inactive. If the transfer is set to the poverty line the cost would be 14.9% of GDP, almost three quarters of the tax revenues in Chile (20% of GDP in 2019).

A large body of evidence suggests that cash transfers can achieve significant reductions in poverty. These cash transfers can promote credit access, better eating habits, better school attendance, better academic results, better cognitive development, reduction of domestic violence, and female empowerment (Banerjee, Niehaus and Suri, 2019[44]). Evidence on the impact of cash transfers on labour participation and formal employment are mixed (OECD, 2011[45]). While some evidence suggests that cash transfers do not discourage - and in some cases even encourage - labour participation by beneficiaries (Banerjee

et al., 2017[46]), other evidence from Latin America suggests that the exact design matters, as cash transfers can decrease incentives to participate in formal employment (Bergolo and Cruces, 2021[47]). This formal labour supply effect is usually linked to abrupt benefit withdrawals for beneficiaries who find a job and earn incomes above the benefit eligibility thresholds, which can imply high implicit tax rates.

To maintain incentives for formal work, graduation from cash transfers should be gradual. In particular, the value of the forgone transfer should always be smaller than the additional work income when a beneficiary moves into (formal) employment. Otherwise beneficiaries might be reluctant to take up work for fear of losing their benefit. The design could include a phase in which for every additional peso earned, only part of the self-declared additional earnings are taken into account to calculate the cash benefit, until gradually reaching benefit withdrawal. Tying benefits to individual behaviour that promotes future employment outcomes such as school completion, training and participation in public employment services would also help families to graduate from social assistance. Ex-ante and ex-post impact assessments should be systematically conducted to evaluate the effects on (formal) labour force participation and adjust the design if necessary.

The poverty line could be a useful benchmark for determining benefit levels. By calculating the cash transfer as the difference between the household income and the poverty line (taking into account household size), the programme would ensure that no household or individual is left in poverty. Benefit levels could consider specific household characteristics. One example is the Spanish guaranteed minimum income programme implemented in 2020, in which a certain amount is added to the benefit for each additional household member or for single-parent households. The programme was introduced in parallel with the gradual phase-out of the existing Child Benefit scheme.

While this cash transfer programme should not necessarily be limited in time, periodic reassessments should be undertaken. The programme should be accompanied by strengthening underlying information systems and verifying self-reported household information, to provide incentives for individuals to report their income and wealth truthfully. Penalties for providing inaccurate or false information could strengthen these incentives.

A related alternative to this cash transfer programme would be a negative income tax or earned income tax credit. Evidence shows that the Earned Income Tax Credit in the United States has raised labour force participation, particularly among single mothers (Hoynes and Patel, 2017[48]). There are also positive effects on poverty reduction, as the programme rewards work and supplements the income of low-wage workers. Similar programmes have also decreased informal employment in developing countries (Gunter, 2013[49]).

The salient distinction between the proposed cash transfer programme and the negative income tax is that the latter is financed directly through a progressive income tax. Another important difference is that in the case of the guaranteed minimum income part of the transfer can be conditional on educational and health behaviours. Finally, a network of social workers is in charge of verifying and constantly improving data on vulnerable households while raising awareness of available benefits.

Improving the social information system

Chile has accumulated almost 40 years of experience in the development and use of targeting instruments for the allocation of social benefits. The Social Household Register, the current social information system, has achieved a wide coverage of the population, about 75% in 2020, with a good coverage of most of the 40% vulnerable population, with 62% of households registered. Despite this coverage, there is significant heterogeneity at the local level, with communes with most vulnerable populations having lower coverage (CNEP, 2022[38]).

Efforts to increase coverage should continue with a view towards covering the whole population. This is key for providing better socioeconomic information for designing and implementing new social programmes

and entitlements as well as for monitoring existing ones (Berner and Van Hemelryck, 2021[50]). Automatic registration of all citizens could help, as in the case of Uruguay, where an integrated information system gathers data and administrative records from more than thirty institutions.

The social information system needs to adapt to respond more quickly and efficiently to shocks faced by households. The relatively slow response during the beginning of the COVID-19 pandemic was partly due to the complexity of the registration and updating procedures within the social registry. Registration focused mainly on manual fact-checking of self-reported household information, rather than relying on background verification procedures based on available administrative data. As a result, the system was not able to reflect the new economic situation of households in a timely manner. There have been significant efforts to include administrative databases and make the registry more responsive.

Enhancing the capacity of social programmes to respond to crises would require improving the real-time nature of the database and developing a targeting instrument that captures short-term or sudden changes in individuals and households' income status (Berner and Van Hemelryck, 2021[50]). For example, Brazil has used self-declared per capita household income to deliver *Bolsa Familia* benefits, its main cash transfer programme, and this has shown to be a good targeting instrument (WWP, 2017[51]). This requires fast cross-checks of income data with other data sources and a high interoperability between registries to reflect immediately changes in labour market status or household income. Doing so would enable social policy to protect those facing income shocks even if they do not live in structural poverty.

Sustained progress with the social registry could also be achieved by merging additional administrative databases and further increasing the interoperability among them. For example, Estonia uses advanced digital tools and designed a data exchange layer for whole-of-government called X-Road. The objective is to allow citizens, businesses and government entities to securely exchange data and access information maintained in various agencies' databases over the internet.

Implementing a universal income tax declaration and merging it with the social registry would make more reliable information on income available and allow for better cross-checking of income data. Tax declarations are typically used in advanced OECD countries for the targeting and delivery of social benefits. Although many Chileans do not pay taxes, filling a tax declaration could increase awareness and help strengthen a culture of tax compliance.

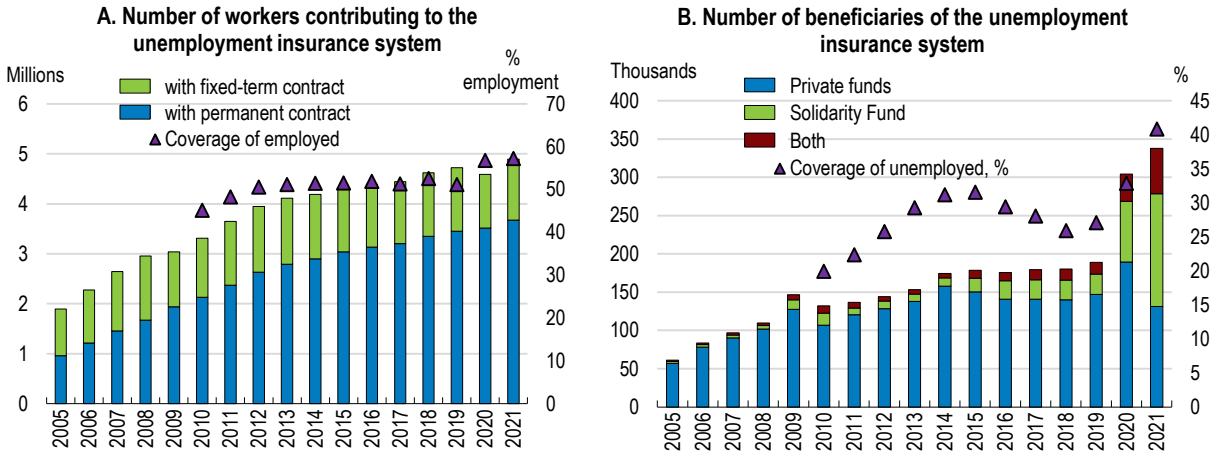
Better protecting against job loss

Coverage of the unemployment insurance system is low

Chile is one of the few countries in Latin America with unemployment insurance for formal workers (Box 2.5). The number of affiliates and beneficiaries of the unemployment benefit system has increased constantly since its creation, but remains low (Figure 2.16). Between 2010 and 2020, the percentage of employed people who contributed and are covered increased from 50% to 60%, as a result of a decrease in informal and self-employment. Despite this increase in coverage, as of the first quarter of 2020, 31% of the employed had no coverage against unemployment and 13% were contributing to the system but did not meet the eligibility conditions (ILO, 2019[52]).

The low coverage reflects frequent informality and self-employed jobs, but also short duration of employment contracts and their high turnover (Huneeus, Leiva and Micco, 2012[53]; ILO, 2019[52]). Only 50% of employees that terminate a contract in a given year have enough contributions in their accounts to access benefits. Moreover, 50% of workers with fixed-term contracts had non-contributing periods lasting more than three months from the same employer in 2015, which impedes their access to the Solidarity Fund (Sehnbruch, Carranza and Prieto, 2019[54]). Hence, the unemployment benefit system protects workers with higher income levels and more stable jobs much better than it protects vulnerable workers, who are also much more likely to become unemployed (Sehnbruch, Carranza and Contreras, 2020[55]).

Figure 2.16. Coverage of the unemployment insurance system has increased but remains limited

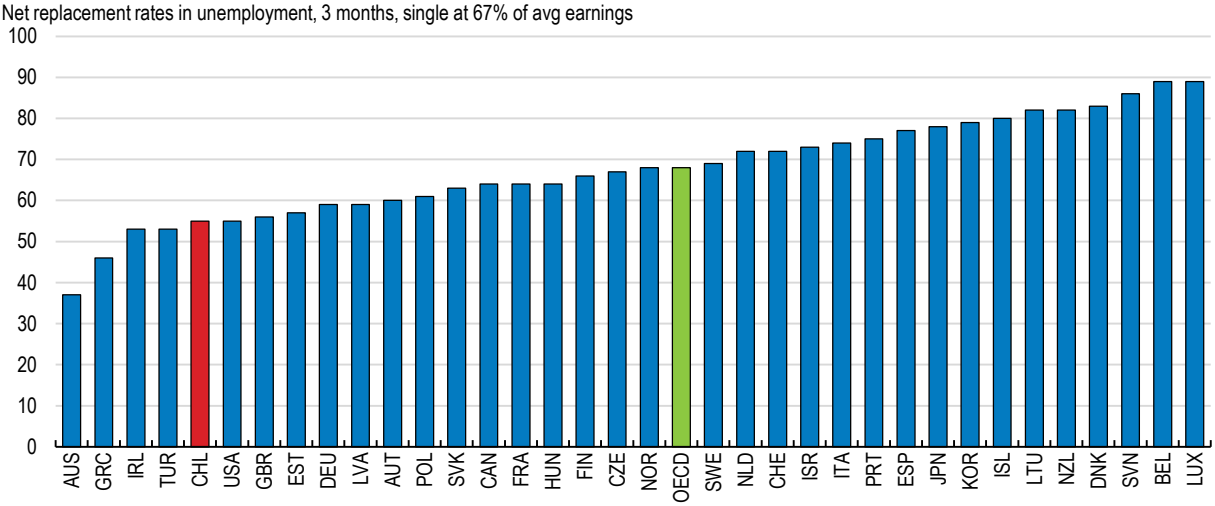


Source: Secretariat calculations using Superintendencia de Pensiones de Chile and INE data.

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Benefit levels remains limited (Figure 2.17). While the unemployment insurance offers a replacement rate of 70% in the first month, it progressively declines to 30% from the sixth month, against an average of 61% after six months in OECD countries.

Figure 2.17. Replacement rates in unemployment remain limited



Source: OECD (2022), Benefits in unemployment, share of previous income (indicator). doi: 10.1787/0cc0d0e5-en.

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Box 2.5. Chile's unemployment benefit system

The Chilean unemployment benefit system, in place since 2002, is based on individual accounts with complements from a solidarity fund. While individual accounts are financed through mandatory contributions from dependant workers and its employers, the solidarity fund is financed by employer's contributions and complemented with general taxation. In this system, workers need to fulfil certain requirements to withdraw money from the unemployment individual savings accounts or accessing the solidarity fund related to number of months that they have been contributing (Table 2.4). Workers on

permanent contracts have also the right to severance payments. The legal severance pay is an amount equal to one month of salary for each year worked, with a maximum of 11 months. The severance payments are relatively high with respect to the average OECD country, and also in Latin America (OECD, 2018[5]).

One advantage of individual unemployment savings accounts over other unemployment insurance systems is that they significantly limit the risk of moral hazard (ILO, 2019[52]; OECD, 2011[45]; OECD, 2018[56]). By allowing workers to run down their personal savings during periods of unemployment, workers internalise the cost of unemployment benefits, thus strengthening the incentives of the employed to prevent job loss and of the unemployed to return to work quickly. Individual unemployment savings accounts can also strengthen incentives for working formally since social security contributions are less perceived as a tax on labour and more as a delayed payment (OECD, 2018[57]). Additionally, contributions accumulated during the employment career are not withdrawn by the worker, any surplus could be credited in the form of pension entitlements upon retirement, which could be also perceived as savings for retirement. The disadvantage of individual unemployment savings account system is that generally individuals with lower contributory capacity, who also tend to have a higher risk of unemployment, tend to receive insufficient protection. This is partially addressed by the Solidarity Fund that can be accessed once the individual accounts have been exhausted and it is financed by worker's contributions and general taxation.

Table 2.4. The unemployment benefit system in Chile

Contract type	Contributions to individual accounts	Contribution to the Solidarity Fund	Requirement for access when unemployed		Benefits
			To individual accounts	To the Solidarity Fund	
Permanent contract	Worker 0.6% of wages Employer 1.6% of wages For a maximum of 11 years	0.8% of wages for all the duration of the contract	12 continuous or discontinuous contributions in the last 24 months. Voluntary or involuntary termination of contract.	12 contributions in the last 24 months. The last three contributions need to be done continuously and from the same employer. Having insufficient resources in individual account. Dismissal due to unforeseeable circumstances, force majeure or due to the needs of the company.	In the first month, 70% of the average wage of the last 6 or 12 months. This percentage falls progressively to 30% from the sixth month onwards. Workers receiving the benefits from the individual accounts can collect benefits until their balance is exhausted. The Solidarity Fund covers up to the fifth month (if permanent worker) or third month (if fixed term worker). For fixed-term workers the replacement rate starts are 50%, 40% and 35%. The benefit received is in proportion of the average earnings of the last 12 months and has maximum and minimum caps. The benefits received from the Solidarity Fund are conditional on enrolment in public employment services.
Fixed-term contract	Employer 2.8% of wages	0.2% of wages	6 continuous or discontinuous contributions in the last 24 months. The last three contributions need to be done continuously and from the same employer. Proof of termination of contract.		

Source: OECD Secretariat.

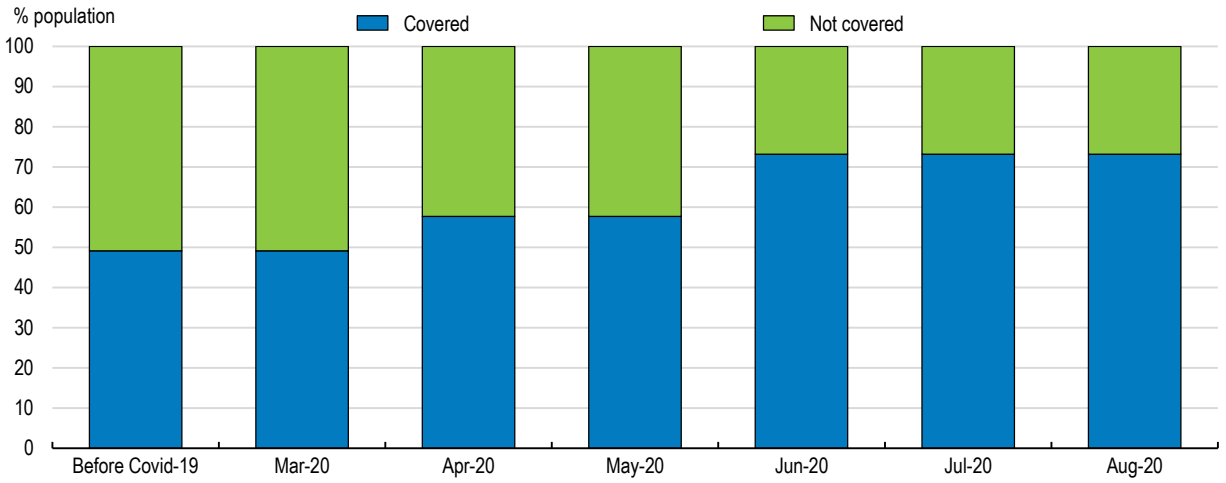
To increase protection of formal workers, authorities increased coverage and benefits of the unemployment benefit system during the social unrest in late 2019, and then because of the pandemic. In April and again in September 2020, the replacement rate was raised to 55% from the third month of unemployment onward, and the minimum and maximum benefits were increased. Eligibility criteria were reduced to 6 months of contributions in the last 12 months. These changes were temporary until October 2021. Additionally, in 2020 a job retention scheme (the employment protection law *-Ley de Protección del*

Empleo) which allowed firms and workers to agree on the suspension of employment contracts during lockdowns, enabling them access to the unemployment benefit system. It also introduced a short-time work scheme with the possibility of negotiating a 15-50% reduction in working time, while receiving income support from unemployment benefits. The job-retention and short-time work schemes benefitted around 1.1 million workers in formal jobs (around 18% of formal workers) up to December 2021, which mitigated formal job losses (CNEP, 2022[38]) and had a positive effect on workers returning to their jobs (Granados, Rivera and Villaseca, 2022[58]).

To fill the gaps of the unemployment insurance system and increase protection of informal workers, authorities implemented emergency cash transfers, as discussed in the previous section. However, at least during 2020, there was still a significant gap in the protection against income loss (Figure 2.18), which was mainly concentrated in informal and self-employed workers (Montt, Ordóñez and Silva, 2020[59]).

One clear lesson from the pandemic is that Chile, as many other countries with many vulnerable workers, cannot rely on unemployment insurance alone to protect workers from the fallout of an economic crisis or rapid changes in the labour market that generate unemployment. The unemployment benefit system need also to be linked to other social protection mechanisms to provide a minimum income-protection to workers with precarious jobs.

Figure 2.18. Protection against job losses has improved but significant gaps remain



Note: Those covered includes those using the unemployment benefit system and the emergency cash transfers.
Source: (Montt, Ordóñez and Silva, 2020[59]).

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Improving income protection for dismissed workers

Implementing the single cash benefit programme for the vulnerable, as discussed previously, could improve the income protection for dismissed workers from vulnerable backgrounds. As it provides a backstop for all those losing their job or income, regardless of the type of job (fixed-term or informal job), it could serve as universal pillar of protection in case of job displacement. This would allow to close the existing unemployment benefit insurance gaps systematically without the need of designing ad-hoc measures during emergencies or crisis, as evidenced during the pandemic. In practice, for workers earning the minimum wage, a cash benefit equivalent to the poverty line would imply a replacement rate of around 50%. To implement the single cash benefit programme, it will be crucial that the targeting system and the Household Social Registry become more agile and able to detect, or at least verify, changes in workers' labour market status and income without long delays.

As the cash benefit scheme is designed to avoid poverty, a second contributory pillar, based on the existing unemployment insurance system, could top-up benefits to provide consumption smoothing and maintain living standards for higher-income dismissed workers. This second pillar would be financed from individual savings accumulated by workers.

Implementing reforms to the current unemployment benefit system would deliver better protection for workers during dismissals, for example by doing permanent some of the changes to the unemployment insurance system during the crisis, or, at least, automatically triggered when unemployment reaches certain thresholds. Reducing the required minimum contribution periods for fixed-term contract workers would improve coverage and benefits for jobseekers. The short-time work scheme—in which workers accept a temporary reduction in work hours and pay, and the government bridges some of the resulting income gap—could also be made permanent, as has shown to be a useful instrument during the pandemic. These schemes have been successfully used in many OECD countries even before the pandemic. Two good examples are the cases of Austria and Germany that have been successful protecting jobs when there was a temporary lack of labour demand (Balleer et al., 2016[60]).

There are several benefits to this approach. Most importantly, it would expand protection in the case of dismissal to all workers without distinguishing by type of workers, allowing informal and workers with contracts of short duration to access income support. Low-income informal workers or workers under short-term contracts that could not access the unemployment insurance system, even if they contributed for some time, would access income support through the single cash transfer programme during unemployment, while at the same allowing them to access for training or public employment services. Higher-income workers would receive the cash transfer and the top-up coming from the unemployment insurance system, which would allow for a more adequate replacement rate during unemployment. Secondly, it would allow reducing social contributions increasing the incentives for formality and guaranteeing coverage of the social protection. Third, it would also allow job seekers to look for jobs without the immediate concern for minimum survival. Doing so, the programme would increase the bargaining power of workers to obtain fair wages without relying on the minimum wage, which generates distortions against the generation of formal work.

Beneficiaries of the cash transfer programme and the unemployment insurance system would need to be automatically registered with the labour market intermediation services to support the search for employment and training. Strengthening the institutional capacity of the Public Employment Service is needed to improve the quality of services provided. Improving quality and relevance of the job training system will also be essential. In Chile, the skills gap is wide and the job training system doesn't help to bridge this gap. Professional training is not always of good quality and is insufficiently aligned to the needs of the labour market (CNP, 2018[61]). Additionally, it does not reach those that need training the most, such as the unemployed or vulnerable workers (OECD, 2021[6]).

Moving towards an effective governance of the training system with a clear national regulatory framework and a clear national plan would help, as recommended in previous Economic Surveys of Chile (OECD, 2018[5]; OECD, 2021[6]). A full revision of the training system and better aligning training courses with labour market needs will be paramount for a well-functioning training system. The productivity commission has recommended redirecting all public resources for training, including those of the tax credit for training *(Franquicia Tributaria*), to a training fund (CNP, 2018[61]). The fund should focus on those that need training the most, unemployed, inactive and those working on non-standard contracts and vulnerable workers.

A relatively high minimum wage raises formal salaries but may exacerbate informality

In relative terms, Chile's minimum wage - at 72% of the median wage and 48% of the mean wage of full-time employees in 2019 - is high in comparison with other OECD countries (Figure 2.19). Authorities increased the minimum wage on two occasions during 2022, in May and August. This has lifted the minimum wage by a total of 18.7% relative to 2021, to CLP 400 000, more than offsetting high inflation, which stood at 14.1% year-on-year in August 2022.

Statutory minimum wages are usually the most direct policy lever governments have for influencing wage levels, especially at the bottom of the distribution. International evidence on the impact of minimum wages on employment is not conclusive (Broecke, Forti and Vandeweyer, 2017[62]). Based on a review of the evidence, OECD (2015[63]) concludes that the impact of moderate minimum-wage increases on employment tends to be small in both advanced and emerging economies, although effects on some vulnerable groups – such as youth – may be more negative. For developing countries characterised by the co-existence of formal and informal employment, minimum wages that are too high and not effectively enforced may cause employees to be displaced or shifted from formal to informal employment (Nataraj et al., 2013[64]; Del Carpio and Pabon, 2017[65]).

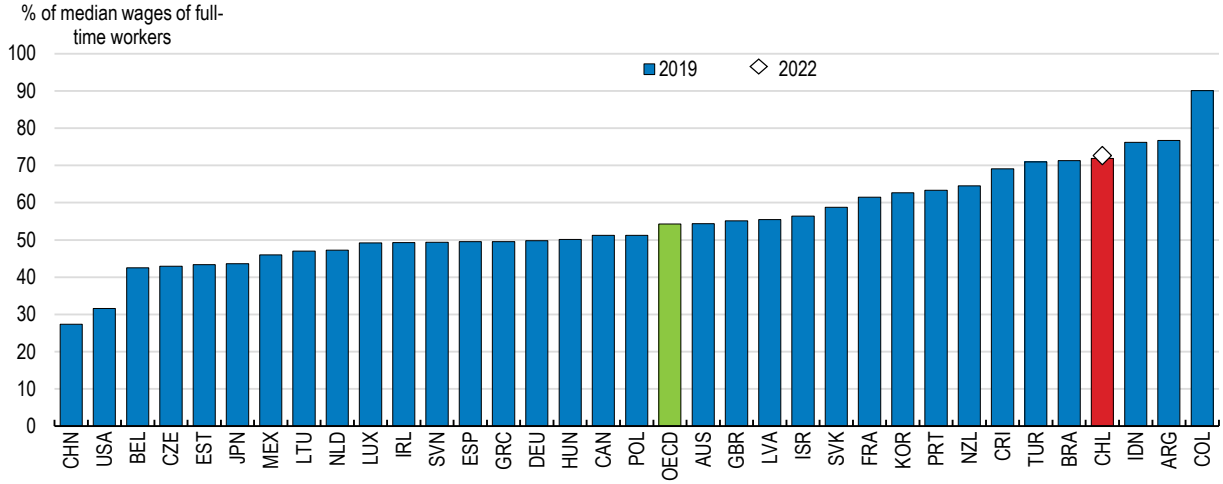
Ultimately, the impact of minimum wage increases depends on the current level relative to the wage distribution, but also how binding it is, the degree of compliance and enforcement, competition in labour and product markets and behavioural responses of employers (OECD, 2018[57]). For Chile, one study shows that minimum wage increases have had small and positive effects on formal wages, and non-significant effects on formal employment (Grau, Miranda and Puentes, 2018[66]). In the context of a relatively low minimum wage in Brazil in the early 2000s, one study finds no negative impact on overall formal employment in response to minimum wage increases, but the study does find negative impact for groups more exposed to the minimum wage (Saltiel and Urzúa, 2020[67]). Another study for Argentina finds that minimum wage increases have had a small impact on formal sector wages, but have increased wages in the informal economy (Khamis, 2013[68]). This may be explained by the "lighthouse effect", i.e. a signal given by the minimum wage to workers and employers in the informal sector about socially acceptable minimum levels of pay. Some empirical studies show that minimum wage hikes tend to reduce wage inequality (Engbom and Moser, 2018[69]; Maurizio and Vázquez, 2016[70]). Still, there are limits to what minimum wages can achieve. When the minimum wage is set too high, it can cause significant job losses or shifts to informality and hence have undesirable distributional effects.

Further increases in the minimum wage in Chile will need to be carefully evaluated as they could potentially lower formal employment prospects, especially for low-skilled workers, and people located in rural and less developed regions. This is particularly relevant in the context of other reforms that could increase the labour costs of formal employment. This effect is somewhat mitigated by differentiated minimum wage provisions for youths and for the elderly, two groups with traditionally weak attachments to the labour market. The authorities have implemented temporary subsidies to help SMEs adjust to the recent increases in minimum wages and lower the risks of job displacement or informality. The subsidy covers around 50% of the minimum wage per worker, being more generous in the first months. Some countries, most notably France, have introduced sizeable reductions in employer social security contributions for workers at around the minimum wage, thereby lowering the ratio of minimum-to-median labour costs below that of the minimum-to-median wage. Other countries have also used targeted reductions in income taxes for low-wage workers (OECD, 2018[57]).

In the medium term, a permanent and independent commission could provide recommendations on setting minimum wage increases, as in other OECD countries (OECD, 2018[57]). For example, the process of setting minimum wages in Germany and the United Kingdom includes a systematic monitoring of its potential employment impact by specific independent bodies mandated to evaluate and provide

recommendations (Low Pay Commission UK, 2018[71]; Eurofound, 2018[72]; Vacas-Soriano, 2019[73]). The Low Pay Commission in UK is formed by experts and academics, and is mandated to evaluate and advise the government on the impact of increasing the minimum wage. The commission conducts research and publishes annual reports to inform the debate on minimum wages and its impact on employment. This advice could then feed into the social dialogue and negotiations between social partners and authorities for setting the minimum wage.

Figure 2.19. Minimum wages are high relative to median wages



Note: Median gross monthly earnings of full-time employees (working 30 or more actual hours per week on the main job). Exactly half of all workers have wages either below or above the median wage for the OECD countries. Data source median wages for Chile is CASEN adjusted by the nominal index of remuneration (IR-ICMO) from the National Statistics Institute. Year 2022 for Chile is an estimation considering the legislated minimum wage in August 2022 (CLP 400 000) and an increase of annual nominal median full-time workers wages of 13%. Percentage of minimum to average wage 2017 for China, Indonesia.
Source: OECD, OECD Employment Outlook Database; Chile: Ministry of Finance; China Ministry of Human Resources and Social Security, National Bureau of Statistics; Instituto Brasileiro de Geografia e Estatística (Pesquisa Nacional por Amostra de Domicílios); International Labour Organisation (ILO) Database on Conditions of Work and Employment Laws; Ministry of Man Power and Transmigration of the Republic of Indonesia and Statistics Indonesia (BPS); National Institute of Statistics and Census of Argentina.

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A reform of the pension system is needed to provide better pensions and reduce informality

Pension benefits for women and the middle-class remain low

Chile was the first country to replace a traditional pay-as-you-go system with a mandatory fully funded individual capitalization pension system based on a defined contribution and private administration of the funds (Box 2.6). A public non-contributory pillar complements the private capitalization funds delivering better coverage and benefits for low-income workers and has been shown to reduce substantially old-age poverty (Centro UC, 2017[74]). However, the social unrest of 2019 made clear that many Chileans were facing inadequate pension benefits pushing the government to increase benefits of the non-contributory pensions and finally introduce a new universal guaranteed minimum pension in early 2022, increasing benefits and coverage. Nonetheless, political demand for further reforms of the current contributory pension system remain significant.

Box 2.6. The Chilean pension system

Chile was the first country to replace a traditional pay-as-you-go (PAYG) system that offered a defined benefit with a fully funded pension system based on a defined contribution that financed individual capital accounts managed by private fund managers in the early 1980s. A parallel PAYG system was kept for the police and armed forces. Early assessments linked the new pension system with growing private savings and with the development of the depth of local financial markets (Roldos, 2007[75]) supporting economic growth (Corbo and Schmidt-Hebbel, 2003[76]). The apparent success of the Chilean experience sparked a wave of pension reforms in Latin America and other emerging markets.

Probably the most important change to the pension system was the creation of the solidarity pillar in 2008, a non-contributory pension scheme providing a minimum benefit to those aged more than 65 that belong to the 60% more vulnerable population. It was composed by a minimum benefit for those who did not participate in the pension system (*Pensión Básica Solidaria*) and another benefit to retired workers whose monthly pensions financed by individual account assets did not reach certain thresholds (*Aporte Previsional Solidario*). Since then, the pension system consists of three components: a redistributive poverty-prevention tier, a mandatory individual account tier, and a voluntary savings tier.

At the beginning of 2022, the Government approved a new guaranteed universal pension for people over 65 years of age who do not belong to the richest 10% of the population. The new benefit replaces the solidarity pillar. The value of the benefit is almost one poverty line (CLP 193,000 – USD 231 a month) for those with self-financed pensions up to CLP 630 thousand (1.6 times the minimum wage at the end of 2022) and a decreasing supplement for persons with self-financed pension between CLP 630 thousand and CLP 1 million (2.5 times the minimum wage). Self-financed pensions are top-ups to this minimum floor, and, if any, voluntary savings would be added.

There is also a universal Grant per Child (*Bono por Hijo*) for women, where the mother is eligible for an additional supplement once she reaches 65 years old. The supplement is equivalent to 18 months of contributions at 10% over the minimum wage set in place at the time of birth for each child, plus the average net rate of return on defined contribution pension plans from the date of the birth until the benefit claim (about USD 12.70 in 2020 per month).

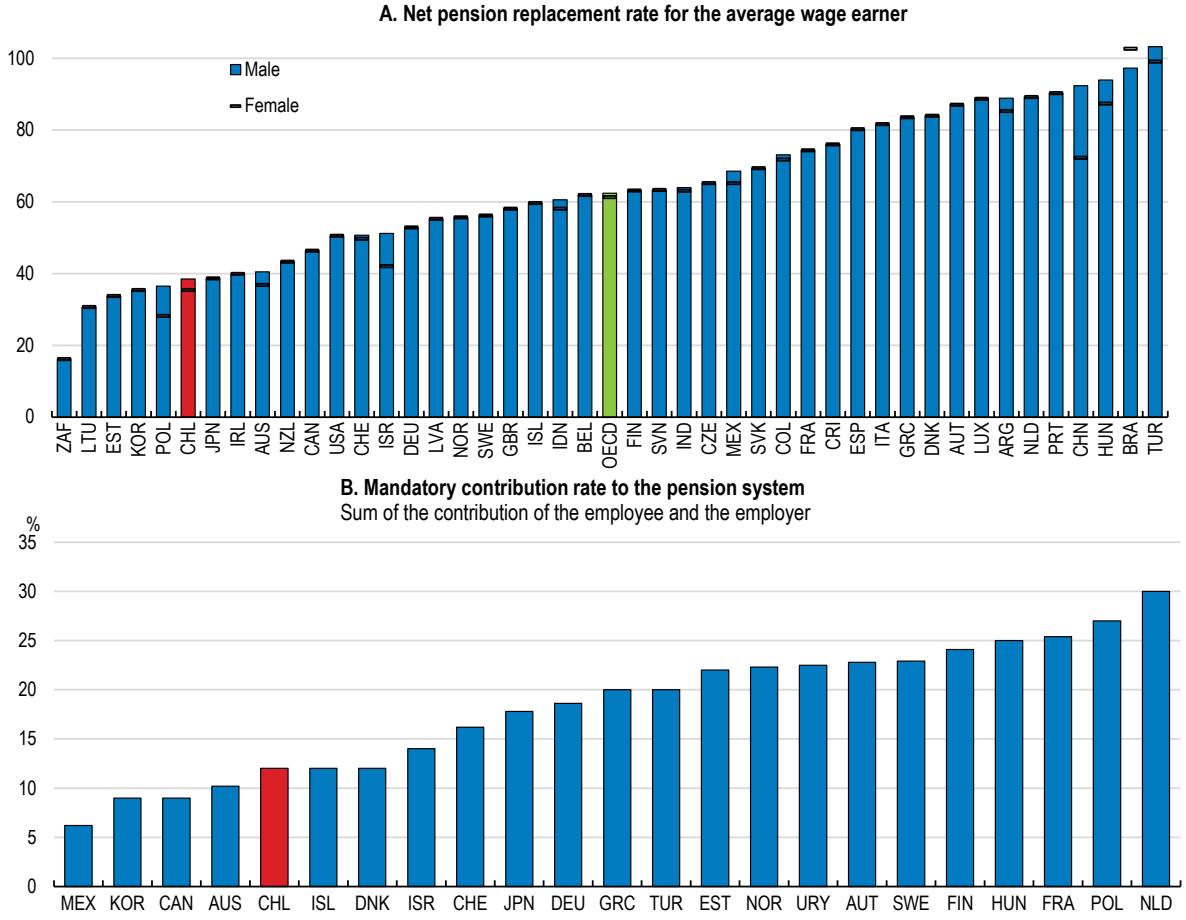
In the second tier, workers contribute 10% of their wage to an individual account and choose a private-sector *Administradora de Fondos de Pensiones* (AFP) with which to invest their pension contributions. Administrative fees, of around 1.16% of wages, are levied on top of the contribution rate (not out of the mandatory contribution). There is a ceiling on covered earnings, which in 2020 was equivalent to CLP 2 700 000 (around 7 times the minimum wage). Employers are not required to contribute to employees' AFPs, although since 2008 employers have been required to pay the premiums for workers' survivor and disability insurance, which are provided by private insurance companies. Upon retirement (65 for men and 60 for women), the worker may withdraw assets that have accumulated in the individual account as an immediate or deferred annuity or through programmed withdrawals. Coverage may become effective before that age if the person is declared disabled, being older than 17 and younger than 65 (disability pension). The third tier allows workers to supplement retirement income with voluntary, tax-favoured savings. Workers never lose their contributions because there is no minimum period required to qualify for a pension.

Early retirement is allowed at any age in the defined contribution scheme as long as the capital accumulated in the account is sufficient to finance a pension above certain thresholds. The first condition is that the benefit must be at least equal CLP 399 500 (close to the minimum wage in 2022). The second condition is that the pension must be at least equal to 70% of the average income in the ten years prior to claiming a pension. The normal retirement age is reduced by one or two years for

each five years of work under arduous conditions in specific occupations. The maximum reduction of the normal retirement age is ten years.

The third and voluntary tier covers employees and self-employed workers. It is a fully funded individual account scheme and the balance can be transferred to the mandatory individual account upon retirement. Voluntary pension savings are managed by pension fund managers or other financial institutions, including banks, mutual funds, insurance companies, and others private entities authorized by the Financial Market Commission. There are two types of voluntary savings plans, individual and occupational savings plans (the plan is set up by the employer). Both plans are subject to the same tax treatments. There are two regimes for the tax treatment of voluntary contributions. Members may deduct the amount of the voluntary contributions from their income tax base (tax regime B), or they can opt for a state matching contribution of 15% of annual voluntary contributions (tax regime A) with a limit of USD 380. In the latter case, the state contribution is lost if the savings are withdrawn before retirement.

Figure 2.20. The Chilean pension system delivers low replacement rates



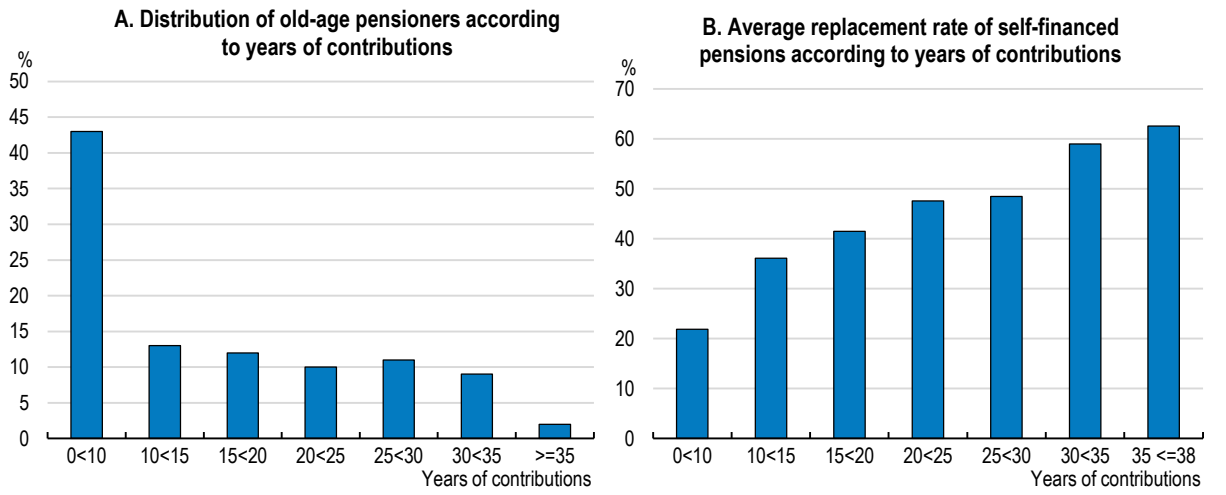
Note: Year 2020. In panel A the calculation does not include the new guaranteed minimum pension in Chile. Main assumptions: full career defined as entering the labour market at age of 22 and working until the normal pension age (65), real rate of return 3%, real earnings growth 1.25%, inflation 2%, and real discount rate 2%. The baseline modelling uses country-specific projections of mortality rates from the United Nations population database for every year from 2020 to 2100. Benefits from defined contribution plans are paid in the form of a price-indexed life annuity at an actuarially fair price assuming perfect foresight. OECD refers to the unweighted average of latest available data of its member countries excluding Australia, Israel and Switzerland. In Panel B, the contribution for Chile includes the commission paid to private funds.
Source: OECD Pensions at a Glance 2019, Pensions at a Glance: Latin America and the Caribbean; OECD Pensions at a Glance 2021.

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Replacement rates of self-financed pensions are low for the average worker even for those who contribute for a full career (Figure 2.20, Panel A). This is partly due to contributions rates to the savings accounts that are among the lowest in OECD countries (Figure 2.20, Panel B). Numerous gaps in the numbers of years a person contributes into the pension system have led to very low pensions. Average contribution density, that is the total number of years that a worker contributes in relation to the potential active life, is around 60% for men and 45% for women (Evans and Pienknagura, 2021[77]; Benavides and Valdés, 2018[78]). There is significant heterogeneity across pensioners with only 10% of pensioners having contributed over 30 years (Figure 2.21, Panel A). Persistent informality and self-employment, together with frequent unemployment and inactivity gaps, explain the low number of years a person has contributed and low coverage of the contributory pension system. Moreover, the system parameters have not adapted to decreasing global interest rates that have affected returns on pension assets and the retirement age has not changed following demographics. Moreover, a mortality table was adopted in 2014, while a new table is being updated, improving the estimation of life expectancy leading to lower pensions as a consequence.

Three extraordinary pension funds withdrawals approved by Congress as a response to the pandemic, between June 2020 and April 2021, added to the challenges of the pension system. These have led to smaller self-financed pensions of current affiliates and lower replacement rates. Close to 4.2 million people, 36.5% of affiliates, depleted their account balances via the withdrawals, 62% being women. The measure was badly targeted as the possibility to withdraw was not based on individuals' specific and exceptional circumstances and it benefited mostly households in the upper quintiles of the income distribution, who are able to save more for pensions. Replacement rates are expected to decline by about 3 percentage points for the average male worker, and by 1.5 percentage points for female workers (Evans and Pienknagura, 2021[77]), with larger effects among older cohorts who have less time to save (Fuentes et al., 2021[79]). Additionally, these pension funds withdrawals create potential future contingent liabilities, as pensions will be lower creating high pressures for more public expenditure in pensions.

Figure 2.21. Effective contribution years are low leading to low self-financed pensions



Note: Data refers to December 2019.
Source: (Cabezón and Larraín, 2021[80]).

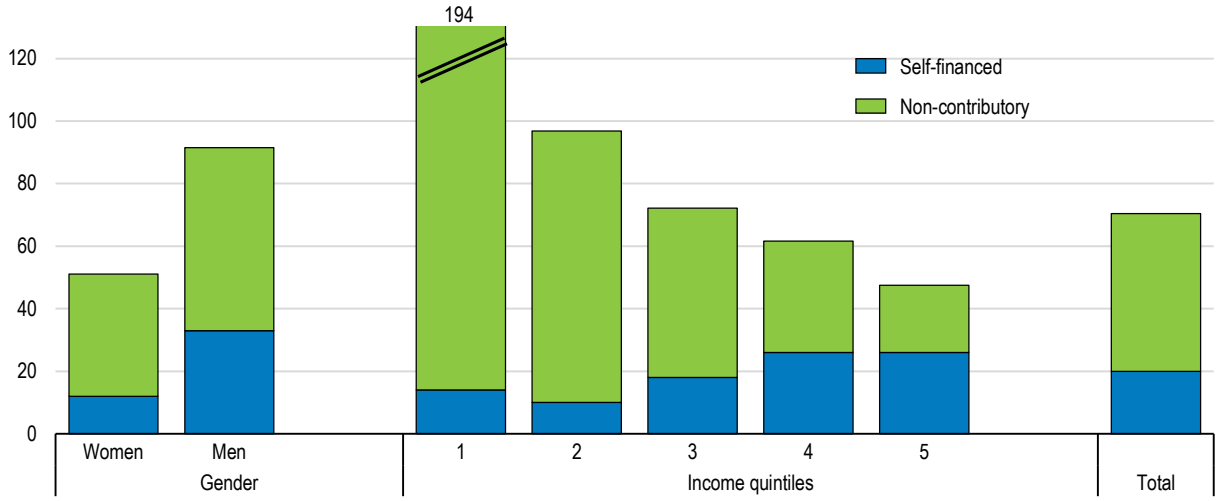
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Pension replacement rates have improved, particularly for low-income workers

The new guaranteed universal pension, in place since early 2022, increases replacement rates and coverage. Coverage will reach approximately 2.1 million old-aged Chileans when fully implemented by April 2023 (90% of those aged more than 65), an increase of 642 thousand more people receiving pensions (26% of those aged more than 65). The median replacement rate is estimated to reach 70% of final labour earnings from the previous 40% for current pensioners according to preliminary estimates (Figure 2.22). As a result, workers from the lowest quintiles of the income distribution have now replacement rates above the OECD average.

Figure 2.22. The new minimum pension has led to higher replacement rates

Median pension replacement rates as % of last gross earnings after including universal guaranteed minimum pension



Note: Estimations include the impact of pension funds withdrawals.
Source: Preliminary estimates under revision, based on (Benavides and Valdés, 2018[78]), "Pensiones en Chile: antecedentes y contornos para una reforma urgente"; https://politicaspublicas.uc.cl/publicacion/pensiones-en-chile-antecedentes-y-contornos-para-una-reforma-urgente/; and public statistics at www.spensiones.cl.

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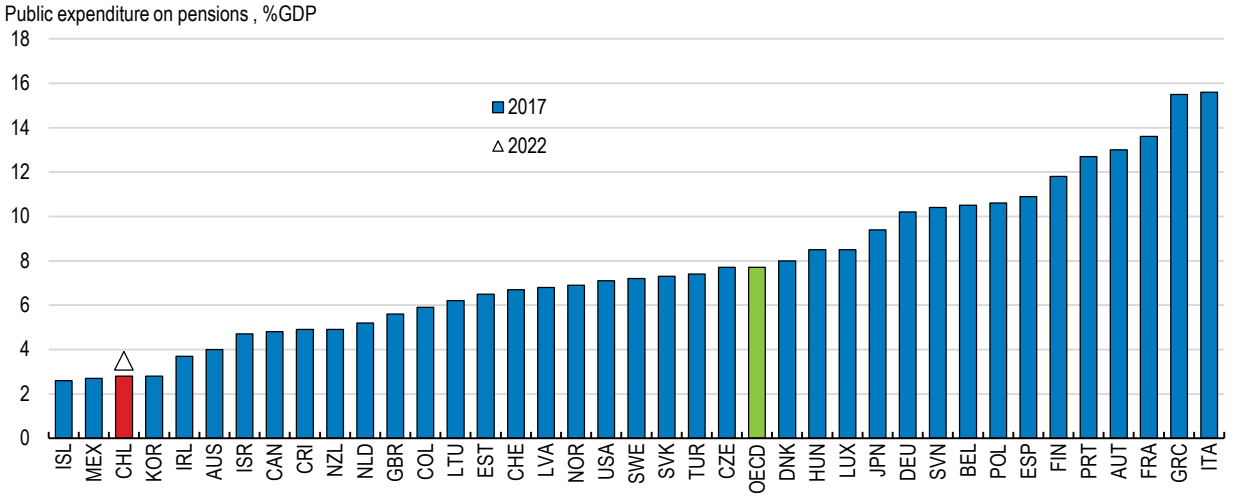
The new guaranteed minimum pension is a step in the right direction to increase structurally low pensions. As it stands, for the minimum wage earners the replacement rate is 50% (not taking into account savings in individual accounts), which is somewhat below the OECD average of 62% for men. The Government plans to increase the benefit to CLP 250 000, equivalent to around 1.3 poverty lines. This would mean a 62.5% replacement rate for minimum wage earners, in line with the OECD average for low-income workers of 64.5% (not taking into account self-financed pensions). Further increases should take into account at least the price evolution of the basic goods basket.

The scheme affects individual decisions about formalisation to a lesser extent than the previous Solidarity Pillar did. Given that the amount of the basic pension does not depend on the savings made, at least for low-income workers, it eliminates the implicit tax on pension contributions that characterised the previous solidarity pillar. Furthermore, the system is easier to administer as the means-testing mechanism applied by the previous Solidarity Pillar has now been replaced by a household income test that excludes only the 10% most affluent. It is significantly easier to identify the small group to highly affluent households than it is to identify the large group of vulnerable households, which makes target easier and decreases the risk of exclusion.

The fiscal cost of the new universal guaranteed minimum pension is also manageable. In 2022, the total fiscal cost is 1.7% of GDP (0.9% of GDP more than before the reform), according to Budget Office. This implies that public spending for pensions would reach 3.5% of GDP in 2022, when including the pensions of the armed forces and payments of the old pay-as-you-go system, which is low relative to the OECD average (Figure 2.23). The guaranteed minimum pension expenditure would amount to around 2.4% of GDP in 2050 as demographics increase the number of pensioners. Increasing the benefit to CLP 250 000, as the Government plans to do, would increase public expenditure for pensions to 3.5% of GDP. This would still be lower than the OECD average, but it is a reasonable increase given that part of this spending is on military and security forces pension system and the transition from the old pension system, which will be completely phased out by 2070.

Despite the new guaranteed universal pension, women continue having low pensions. They contribute less years than men due to greater intermittency in the labour market because of informality, maternity, and the time spent on domestic and care work (OECD, 2021[18]). There is also a large wage gap during their working lives, which translates into lower self-financed pensions (OECD, 2018[5]). This is aggravated by an earlier retirement age (60 for women versus 65 for men). Women's higher life expectancy also implies lower self-financed pensions as the same accumulated assets as a man would deliver a lower deferred annuity or programmed withdrawals. Women continue to have a significant gap of between 25 and 29 percentage points compared to men (OECD, 2021[81]), above the OECD average, although the minimum guaranteed pension helps to reduce the gap. Women receive a grant per child to recognize unpaid caregiving, but it's not enough to fully compensate the gender employment gap (Comisión de Pensiones, 2015[82]).

Figure 2.23. Public expenditure on pensions is relatively low



Note: The year 2022 is estimated using the expenditure calculated in the Financial Report of the guaranteed minimum pension and the expenditure of military forces and the old pay-as-you-go system.
Source: OECD, Pensions at a glance 2021.

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Contributory pensions will require further reforms

Further reforms should focus on enhancing the Chilean contributory pension system by adjusting parameters in terms of contribution rates, retirement age, and the number of years workers effectively contribute to offer adequate pensions while avoiding increases in informality. The new administration is seeking to improve pensions and a reform proposal is still in debate (Box 2.7).

Box 2.7. Reform proposal of the pension system

The main purpose of the reform is to increase the pensions of current and future retirees. While details of a pension reform are yet to be published, some elements seem to have reached consensus:

- A gradual increase of the contribution rate of 6 percentage points. The increase would be borne by employers, phased-in gradually over a 10 year period.
- Some part of the increased contribution rate could go to individual accounts, and the other part could go to collective savings and redistribution with intergeneration and intragenerational solidarity components.
- Creation of a new 'public entity' to administrate extra contributions.

Reforming the contributory pension system

To deliver better pensions, the Government's reform proposal plans to increase employer contribution rates by 6 percentage points for all types of workers. Part of the funds collected this way would be used for redistributive purposes (Box 2.7Box 2.7.). The view underlying the current government proposal, is that higher contributions that finance collective savings of which low-income formal workers would receive more than their additional contribution, could strengthen formalisation incentives (Banco Central de Chile, 2017[83]). This may depend on the degree to which workers value the additional pension promises made to them. Significant uncertainty will always remain around this issue.

At the same time, any future reform to the contributory pension system should pay attention to the potential effects it might have on formalisation incentives. Given that the universal guaranteed minimum pension on its own provides replacement rates that are in line with international practice for most low-income workers, the usefulness of further increasing their labour tax wedge is debatable. Firstly, the non-contributory pillar acts as a key redistribution tool within the pension system, and reduces the need to redistribute through labour charges. Secondly, contributions ultimately increase the cost of formal employment. Increasing contribution rates could further increase informality, particularly for low-income workers. Alternatively, in light of the high rotation in the Chilean labour market, it is also conceivable that this increase could translate, at least partly, into lower formal-sector wages, which could attenuate the impact on formalisation incentives. By contrast, reducing them rather than raising them could help low-income and vulnerable workers escape informality (Box 2.8). Following this line of reasoning, it may be more useful to lower contribution rates for low-income and vulnerable workers to contain informality, particularly around the minimum wage where incentives matter the most, while letting the universal basic pension provide adequate replacement rates.

In that case, contributory pensions could complement the universal guaranteed minimum pension for those with higher incomes, which are less prone to informal work arrangements. This would imply that contribution rates would effectively become progressive, starting at around zero for wage earners below and around the minimum wage and increasing gradually for higher wages.

To ensure adequate pensions, contribution rates could be calibrated to achieve replacement rates of at least 60% of pre-retirement earnings, close to the average OECD replacement rate for men (62%), which would probably imply higher contribution rates for all but the lowest incomes.

Further efforts to boost formality and labour force participation, particularly for the middle class and women, will be key to increase the number of years they effectively contribute. The provision of quality childcare and early childhood education has the potential to significantly increase female labour force participation and will also promote more equitable education opportunities for children from disadvantaged backgrounds (see Chapter 1). Improving access, affordability and quality of long-term care services would also boost female labour force participation as women are usually informal carers. Labour market reforms that reduce

the high firing costs leading to a high share of temporary contracts and the resulting frequent gaps of unemployment and inactivity in the Chilean labour market, as already suggested in previous Economic Surveys (OECD, 2018[5]), would also increase the number of years workers contribute.

Box 2.8. Employment subsidies have helped reduce informality among vulnerable groups

Chile has currently a number of programmes to promote formalisation of vulnerable groups, mainly in the form of employment subsidies targeted to the youth and women of the 40% most vulnerable population covering around half of the total social contributions to be paid to the worker (Table 2.5). There is evidence that these employment subsidies have been successful in increasing employment and reducing informality among vulnerable groups in Chile (Henoch and Troncoso, 2013[31]; Bravo and Rau, 2013[84]; Centro de Microdatos, 2012[85]). However, coverage of these programmes has been low in limiting the impact on overall informality. Evidence for other emerging market economies, such as Türkiye, shows that employment subsidies covering employers' social contribution costs have a positive impact on employment, particularly in small firms, and this is driven by the positive effects on formalisation of existing workers more than creation of new jobs (Aşık et al., 2022[86]). This reflects the importance of reducing social security contributions to boost formal employment, particularly among vulnerable groups.

Table 2.5. Employment subsidies in Chile

Programme	Target population	Coverage as % of target population	Benefit for workers (% of wage)	Benefit for employers	Fiscal cost in 2021 (% of GDP)
Youth employment subsidy	40% most vulnerable aged 18-24	5.0	The benefit depends on earnings, on average 12%	A third of the monthly subsidy	0.017
Contribution subsidy for young workers	New workers aged 18-35, with 24 or less pension contributions, and income lower than 1.5 minimum wages	*0.3	50% of the pension contribution of a minimum wage	No	0.002
Women's Work Bonus	40% most vulnerable dependent or self-employed women aged 25-59	16.6	The benefit decreases with monthly income, on average 12%	A third of the subsidy for 24 months	0.022

Note: * 0.3% of population aged 18-35.
Source: OECD calculations based on SENCE, Finance Ministry, and DIPRES.

How to manage the contributory system

The current contributory pension system would be the basis for the reformed contributory pillar. Maintaining it as a capitalisation scheme has several advantages. First, it establishes a clear link between contributions and benefits, thus incentivising workers to contribute regularly. Second, it would help preserve the benefits that Chile has reaped from its comparatively deep financial markets based on domestic savings (see Chapter 1). Finally, it would help to have the diversification of funding sources, which is generally considered an advantage (OECD, 2016[87]), as the first pillar is financed through general taxation.

The reformed contributory pillar could in principle be administered by either private or by public entities, as happens in other OECD countries (Box 2.9). The creation of a public entity to manage and/or invest pension funds could be a useful complement if it is created in accordance with OECD international best practices. It could contribute to a healthy competition in the market, if strong and transparent governance is ensured and aligned with the OECD Recommendations on Core Principles of Private Pension Regulation (Core Principle 3), could reduce the fees charged by fund managers to their members and

increase the legitimacy of the contributory component of the system. Ideally, workers would be allowed to choose whether their contributions are managed by private pension funds or the public entity. In Uruguay, where this option exists, half of the population has chosen the public entity, which is regulated by private law and works in similar ways as the private funds, resulting in a highly competitive system. In such a context, it would be important to maintain the freedom of choice for affiliates through permanent transfers among pension fund managers.

If the current contributory system is maintained it will need some reforms to strengthen the mechanisms to make sure that private pension funds charge fees in line with the services they provide while ensuring good net performance of investment portfolios. In Chile, pension fund managers charge commissions on the income (flow) of workers' contributions. OECD countries is more common to charge a commission on the managed (stock) assets and many countries cap the fees that pension providers can charge to members (OECD, 2019[88]). A regular OECD recommendation is to use performance-based fee mechanisms. That is, there would be a fixed fee linked to the costs of administration and a variable fee or charge that depends on the performance of pension funds (i.e. the returns that AFPs achieve). However, such a scheme has to be designed with care to avoid fluctuations (introducing, for example, a custodian and disbursing the fees after a window period).

The investment regime could be further aligned with the international best practices to provide optimal returns during the worker's lifecycle. Pension funds' investments are highly regulated though the Multi-Funds Investment scheme, introduced in 2002. There are five funds with differing exposure to equity, from fund A with a maximum exposure to equity of 80% to fund E with an equity exposure of only 5%. In the event of the member not choosing a type of fund, a default allocation mechanism is assigned according to the individual age, where the transition across funds reduces the saver's exposure to equity as the individual ages. The regulation gives members a large degree of freedom to switch between funds. This has resulted in many active fund switches, giving as a result suboptimal returns and participants keeping their savings in funds that do not match their investment horizon (Fuentes, Forthcoming[89]). The excessive fund switching increases the portfolio holding of more liquid assets than otherwise required, and reduce the incentive for investment in long-term assets, reducing pension funds expected returns. To further promote long-term investment and financial stability, funds switching, should be strictly limited in frequency and/or to a few alternative investment options.

Adapting the investment strategy would further optimise investment returns. A strategy that has been used in other OECD countries is the Target Date funds which allows to invest in a more dynamic manner along a glide path that takes into account the ages of a specific cohort, the economic environment, and the market conditions as it moves from one phase to the next. The NEST funds in the UK are an example of a target date approach. Each phase targets both a real investment return and a certain long-term volatility. Contrary to other lifecycle strategies, however, for the youngest members the NEST strategy begins more conservatively to limit losses that might discourage new savers, then builds up the level of risk from a horizon of 40 years to retirement.

Box 2.9. Funded defined contribution pension systems in selected OECD countries

OECD countries have different arrangements in the management of funded defined contribution schemes with private and/or public institutions involved. Some examples:

Australia

The Australian pension system has three components: a means-tested non-contributory component ("Age Pension") that reaches 75% of the elderly; a superannuation guarantee with a compulsory employer contribution to private superannuation savings; and a voluntary superannuation contributions and other private savings (OECD, 2021[90]). The Age Pension is designed to provide a safety net for those unable to save enough through their working life and to supplement the retirement savings of others. The Superannuation system, a defined contribution scheme, is not subject to financial sustainability issues and as the system reaches full maturity, fewer individuals will be reliant on the Age Pension safety-net.

Denmark

The Danish pension system is composed by the public pension (which consists of a basic pension and a means-tested pension supplement that is paid to the financially most disadvantaged pensioners), a mandatory occupational pension scheme based on lump-sum defined contributions: the ATP (the Labour Market Supplementary Pension Scheme) and quasi mandatory occupational pension plans. ATP is as a public pension provider, investor and administrator of welfare benefits. It is one of Europe's largest pension funds with 5.4 million members and pension assets exceeding USD 882 bn (229% of GDP). In addition, quasi-mandatory occupational pension schemes negotiated as part of collective agreements cover about 90% of the employed work force. The public pension and ATP ensure that all pensioners, regardless of labour market attachment, will have an adequate basic income. Occupational pension schemes ensure that a person's income in retirement will not be markedly lower than the income earned during working life. The individual pension schemes cover any special retirement wishes.

Sweden

The Swedish pension system consists mainly of public schemes and quasi-mandatory occupational plans (OECD, 2020[91]). Mandatory public earning-related pensions include both a notional defined contribution scheme and a funded defined contribution scheme. Both cover earnings up to roughly the average wage. Despite the management of assets being fully private, the mandatory funded defined contribution scheme is considered public because contributions are collected by tax authorities, a state-owned agency provides annuities and upon death before retirement assets are not inheritable but distributed among all participants. On top of these schemes, quasi mandatory occupational pension plans negotiated by social partners in collective agreements cover around 90% of workers. A residence based basic pension (guaranteed pension) ensures a minimum level of pensions at 21% of gross earnings.

Adjusting the parameters of the system

Aligning retirement ages of women and men and establishing a link between retirement ages and life expectancy would also help maintain reasonable pension replacement rates over the medium term. Life expectancy at 65 has increased for males and females, whilst the retirement age has remained constant at 60 for women and 65 for men. For example, in 1990-1995 males at age 65 were expected to live 14.5 more years on average after retirement, compared to 18.2 more years in 2015-2020. If retirement age

increased proportionally to life expectancy from 1990-1995 to 2015-2020, the retirement age would increase by 3.3 years for women and 3.7 years for men (Evans and Pienknagura, 2021[77]).

Chile should consider developing a more automated system of updating the key parameters of the pension system, including contribution rates and retirement ages. Compared to discretionary changes, automatic adjustment mechanisms can be designed to generate changes that are less erratic, more transparent and more equitable across generations. About two-thirds of OECD countries employ automatic adjustment mechanisms. For example, Sweden and Finland have the most effective automatic adjustment mechanisms (OECD, 2021[90]). Sweden combines notional defined contribution pensions and a balancing mechanism to ensure solvency, and plans to introduce a link between retirement age and life expectancy. Finland adjusts to changes in life expectancy in a defined-benefit scheme, by changing future retirement ages by two-thirds of changes in life expectancy and by adjusting new pensions. The county also supplements these with a balancing mechanism adjusting contribution rates if needed. Both Estonia and Italy account for changes in the size of the working population through adjusting benefits to changes in total contributions and GDP, respectively, while the statutory retirement age is linked to life expectancy. The German balancing mechanism adjusts to the ratio of pensioners to contributors through adjustments of both pensions and contribution rates.

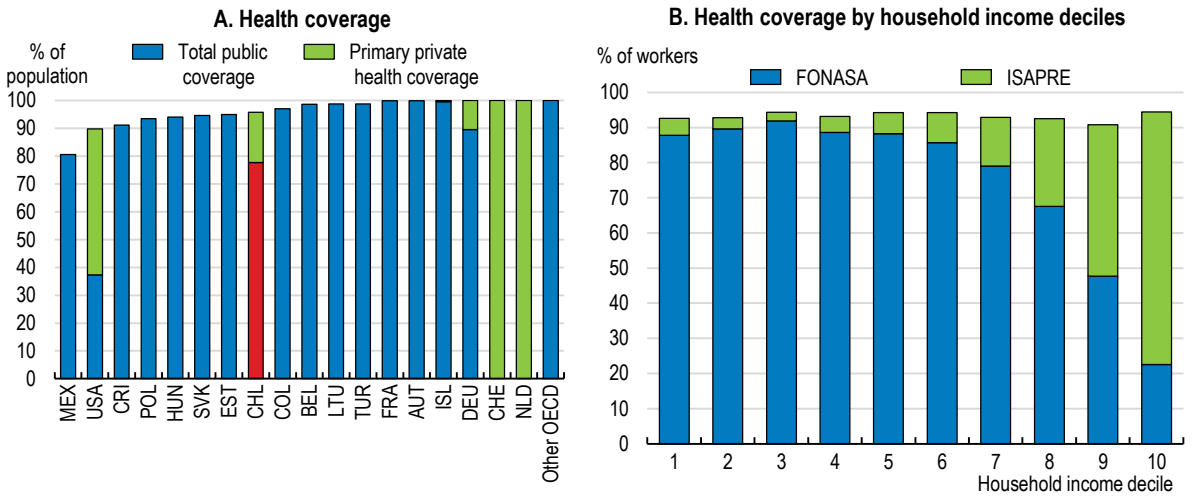
The health system needs a comprehensive redesign to reduce entrenched inequities

Chile's health system has seen significant improvements in coverage over the last decade, achieving almost-universal coverage including among low-income households (Figure 2.24, Panel A). In terms of health outcomes, it is among the top performers in Latin America. However, key challenges remain in terms of the structure of the system, the financial burden on households and inequalities in access to care.

The structure of the system is characterised by two parallel and separate insurance schemes. Around 80% of the population is covered by the public system (FONASA). Enrolment in this scheme is open to all residents irrespective of labour status or income. FONASA covers hospital and emergency room treatment, access to generalist doctors and a limited coverage of specialist doctors and high-cost diagnosis and treatments. Select prescription drugs are covered and FONASA also provides sick-leave benefits for those unable to work due to their health condition. A 2005 Universal Access Plan of Explicit Guarantees in Health (GES) and a 2015 refinement about high-cost diagnoses and treatments (known as the Ricarte Soto Law) have defined minimum benefits and coverage for the health system. Most beneficiaries are subject to co-payments that vary according to income and can reach up to 20% of healthcare costs, although the lowest-income segment is entirely exempt from co-payments for most healthcare services. Formal workers can choose to buy vouchers in private establishments in agreement with Fonasa. Beneficiaries with formal-sector incomes contribute of 7% of their salaries to cover their healthcare coverage with FONASA, while the government also contributes to finance the system.

Another 12% of the population is enrolled with one of several private insurers (ISAPREs), serving predominantly households in the upper income deciles (Figure 2.24, Panel B), according to household surveys. These private schemes have significant space to define their own sets of benefit packages and monthly contributions, which are set to the 7% of worker's salaries and a premium, with contributions being to a large extent risk-based and can vary substantially across individuals. ISAPRES compete in a weakly regulated and competition among them is perceived as low. Recent reforms have banned discriminating fees by gender and have limited age premiums. As a result of risk-specific premiums and their ability to refuse enrolment, ISAPRES tend to select lower-risk patients. This cherry-picking tends to increase the financial burden on the public system.

Figure 2.24. Health coverage is high but there are disparities in the quality of services

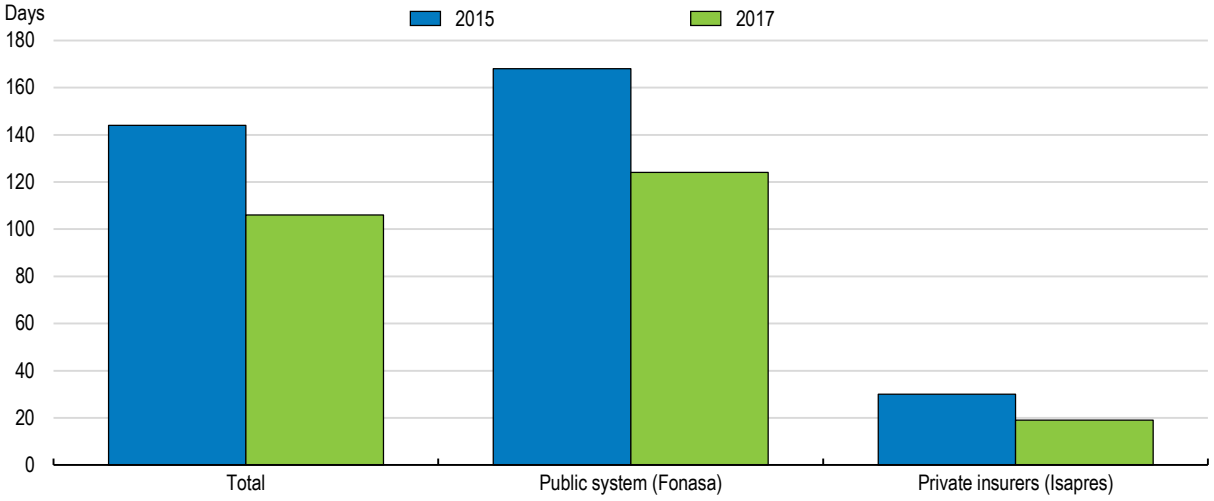


Source: OECD, Health at a glance 2021 and (Morales and Olate, 2021[17]).

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The dual nature of the system leads to significant inequalities with respect to healthcare quality, with FONASA generally providing lower-quality services (Figure 2.25) while ISAPREs do not participate of the risk sharing in the health system. These quality differences are particularly pronounced with respect to waiting lines, which may limit the effective coverage of lower-income individuals to certain healthcare services. The public system offers one doctor for every 920 beneficiaries, while in the private one there is one doctor for every 276 beneficiaries (World Bank, 2021[9]). Quality differences reflect significant discrepancies in per-capita resources, as private insurers dispose of 39% more resources per beneficiary than the public scheme (Bernales-Baksai, 2020[92]). This is despite a significant increase in public health expenditures, which reached around 6% of GDP in 2019 (Figure 2.26, Panel A).

Figure 2.25. Waiting lines are longer in the public health system



Source: IPSUSS, Instituto de Políticas Públicas en Salud.

StatLink https://stat.link/fntho4

As a result, access to healthcare services varies substantially across sociodemographic groups. Visits to the dentist, laboratory tests, visits to specialists and hospitalisations are concentrated among wealthier households, while the use of emergency services and preventive medicine is heavily concentrated among the poor (Núñez, Manzano and Chi, 2020[93]). Although the authorities managed to deliver health services and test and vaccination access to all Chileans during the COVID-19 pandemic by promoting coordination of the public and private systems, there was a strong association between socio-economic status and mortality, with the poorest municipalities of the Metropolitan Region of Santiago having higher mortality rates, lower testing capabilities, particularly in the first months of the pandemic (Mena et al., 2021[1]).

There are also significant regional gaps in access to health services. Significant challenges remain in some regions in terms of infrastructure, the integration of information systems and the availability of treatment and medical specialists, especially in the more remote regions of the country. The Metropolitan Region of Santiago has one doctor for every 385 inhabitants, while in other regions (Libertador Gral. Bernardo O'Higgins and Maule) one doctor serves more than 1,000 inhabitants. Digital tools provide strong potential for further improvements, as evidenced during the pandemic when digital platforms were successfully used to manage the testing and vaccination process, which contributed to Chile's successful vaccination campaign.

Another weakness of the current dual system is the high out-of-pocket spending for healthcare, which is amongst the highest in the OECD and disproportionately affects the poor and the elderly (Figure 2.26, Panel B). This is principally explained by household spending on prescription drugs, especially among FONASA beneficiaries, as they can receive drugs dispensed for free in public primary care and hospitals, but have to pay the full price in retail pharmacies. The high out-of-pocket spending, together with the perception of poor quality of services in the public system, translates into a widespread perception of injustice in access to health care.

This segmentation of the system generates incentives for informality, as informal workers have limited incentives to contribute to a health system that provides low-quality services that they can also access for free if they remain informal (Levy and Cruces, 2021[94]). The segmentation also limits the redistributive and risk-pooling mechanisms embedded in the public system. While 80% of the population is covered by FONASA, only 64% of the population with relatively higher incomes actually pay contributions and co-payments, effectively subsidising the healthcare benefits of the poorest 16%. However, this amounts to a redistribution from middle-income households to low-income households, while those with the highest incomes adhere to the private ISAPRE scheme, where they pay risk-adjusted premiums and hence do not contribute to the redistributive mechanism at all. This exemption of high-income earners from the redistribution mechanism embedded in the public system reduces the funding available for FONASA and increases the burden on public healthcare contributions.

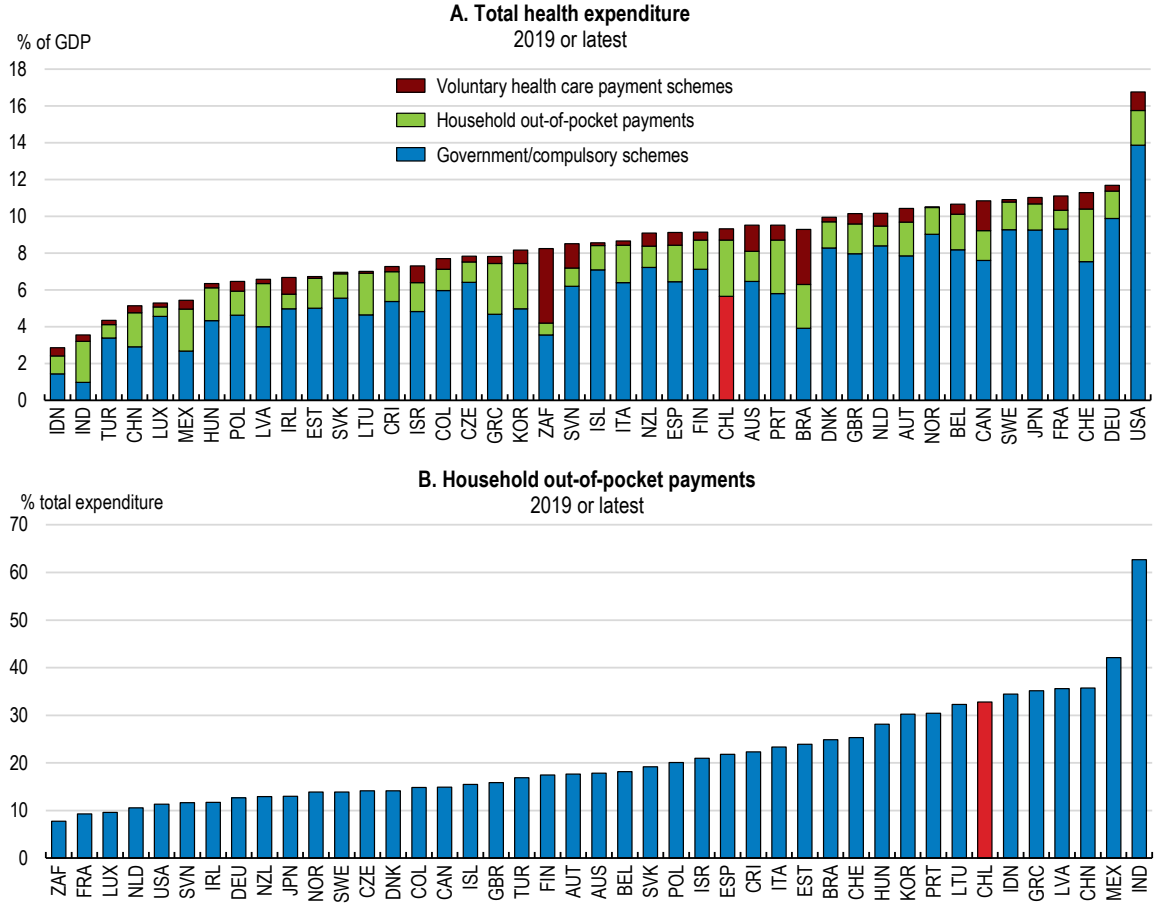
Addressing the fundamental inequalities in Chile's healthcare system will require pooling all existing resources and distributing them to existing insurance schemes based on the number of subscribers and their health risks. This could be implemented through a national health fund that collects all resources for healthcare, for example. Public and private insurance schemes could in principle continue to co-exist under such a set-up. This should be accompanied by more effective regulation of the private insurance scheme and a prohibition of their ability to select good risks, while ensuring minimum standards of quality imposed on public or private insurance entities.

Another option would be to take this one step further and move towards a single unified healthcare system with universal access for the entire population and a common set of high-quality healthcare benefits. Such a universal healthcare scheme could then be supplemented by regulated voluntary private insurance to top up benefits and reduce out-of-pocket spending, as done in other OECD countries (Box 2.10).

The need to eliminate the current disincentives for formal job creation that result from the financing through labour charges, which only affect formal labour, calls for a broader financing of universal healthcare than at present, shifting the financing burden towards general taxation revenues. The need to reduce the labour

tax wedge is particularly relevant for low-income workers earning around the minimum wage, which are disproportionally affected by informal work. For those with higher incomes, the current social contributions could be simply replaced by personal income taxes. Such a move would allow reducing the cost differential between formal and informal employment by 7 percentage points in the relevant income range, e.g. up to 1.5 minimum wages. This would imply a broader reform of personal income taxes, but it would still leave a financing gap and require mobilising additional tax revenues, potential sources for which are discussed in Chapter 1 of this Survey.

Figure 2.26. Household out-of-pocket spending is amongst the highest in OECD countries



Source: OECD, Health Expenditure and Financing database.

StatLink https://stat.link/ew2qy4

Besides changes to the design of healthcare insurance and financing, there is also scope for supply-side reforms affecting the provision of healthcare services. Enhanced public investment in healthcare should be accompanied by identifying and monitoring the main sources of inefficiencies in current healthcare spending, with a view towards increasing the quality of services.

Previous OECD analysis (OECD, 2019[95]) provides recommendations for addressing current population health challenges, including overweight and obesity, tobacco consumption, the need for more effective cancer screening and prevention, and for integrating genomics, i.e. the study of an individual's entire genetic material, into medicine to strengthen public health and preventive care. Recently, Chile's productivity commission has delivered several recommendations to improve the effectiveness of primary healthcare (CNEP, 2022[96]). These include possible improvements in information systems and a wider use of digital tools, improving the management of waiting lines and hospital agendas, and the use of telemedicine. Finally, the creation of a coordinated care pathway from primary healthcare towards higher

levels of care would allow simultaneous quality improvements and cost savings by focusing more on the needs of each patient (World Bank, 2021[9]). This would also help tackle prominent health risks in Chile, such as obesity, tobacco consumption and cancer (OECD, 2019[95]). The creation of an autonomous public entity in charge of the evaluation of health technologies and interventions would allow the implementation of evidence-based and cost-effective actions (World Bank, 2021[9]). There is also scope to improve the process of approving drugs and medical devices, including a more widespread use of generics and competitively-priced drugs, as highlighted in a recent OECD report on the pharmaceutical market (OECD, 2021[97]).

Box 2.10. Universal health coverage: The experience of France and Spain

France has achieved low out-of-pocket spending thanks to universal public insurance (*assurance maladie*), supplemented by regulated voluntary private insurance (*mutuelles*). Almost 95% of the population has voluntary private insurance, which is subsidised for low-income households. Since 2016, there has been a shift towards compulsory complementary coverage, which employers have to buy for their employees, with exceptions for specific groups. Private insurers provide both reimbursement of the co-payments required by the public system and coverage of drugs, medical devices and services that are not covered by the public system. In France, 77% of total health care expenditure is publicly funded, above the OECD average of 71%. Out-of-pocket expenditure incurred by patients accounts for only 13% of all expenditure on medicines purchased at the retail level, well below the OECD average of 39%.

Spain's national health system is based on the principles of universality, free access, equity and fairness of financing, and is mainly funded from general taxation. Public healthcare expenditure accounts for 6.1 percent of GDP. While national planning and regulation remain the responsibility of the Ministry of Health, health competences and primary jurisdiction over operational planning at the regional level, as the responsibility for resource allocation, purchasing and provision lies with 17 regional health authorities (OECD/European Observatory on Health Systems and Policies, 2021[98]). Other strengths reside in the design of coverage policy in the national health system: entitlement based on residence; a generally comprehensive benefits package; limited use of co-payments; and multiple mechanisms to protect vulnerable households from co-payments (WHO, 2021[99]). For example, in 2020, exemptions from co-payments for outpatient prescriptions were extended to beneficiaries of the new guaranteed minimum income scheme.

Achieving universal social protection can be done at an affordable cost

Illustrative simulations, based on microdata from a Chilean household survey (CASEN) for 2017, allow comparing costs and benefits of reforming social protection in Chile, by estimating the likely fiscal cost of different reforms and gauging the impact on poverty and inequality. The cost estimates can only provide an upper bound for the short run, as they are based on the current status quo and do not account for the medium-term benefits from improvements in labour incomes, inequality and productivity derived from formalisation. The latter are notoriously hard to estimate in a reliable way, but they are the ultimate reason why such a reform should be undertaken.

A cash transfer programme as described in section above, that would supplement incomes of those below 65 affected by poverty and lift their incomes to the poverty line would cost 1% of GDP (Table 2.6). The cost is calculated with 2017 pre-pandemic data, and is a reasonably conservative medium-run cost estimate. After replacing existing cash transfer programmes, the net cost would be 0.7% of GDP. This is an upper bound of the estimated costs, as a profound revision of all existing social programmes should be undertaken to eliminate those without the desired impact, which would create more savings than those calculated here.

The fiscal cost of increasing the benefit of the current guaranteed minimum pension as envisaged by current authorities would amount to around 2.4% of GDP in 2050. If the benefit is increased to 1.3 poverty lines, equivalent to CLP 250 000, spending would reach 3.1% in the long-term (Table 2.6). This pension benefit would amount to a 35% increase vis-à-vis the current universal minimum pension guaranteed and imply a replacement rate of around 62.5% for a minimum-wage earner, achieving adequate pension benefits for vulnerable workers. The fiscal net cost (after discount the current benefit) of implementing this increased benefit would amount to 0.7% of GDP.

The impact of the universal guaranteed minimum pension and the proposed cash transfer scheme on poverty and inequality are large (Figure 2.27, Panel A). By construction, these two programmes together are lifting everyone out of poverty in the case of full benefit take-up. Benefits are clearly concentrated at the bottom of the income distribution (Figure 2.27, Panel B). Inequality, measured by the Gini coefficient, would be reduced by 7 percentage points, which would duplicate the impact of the transfer system to reduce inequality. The true decline in inequality will be probability stronger as the feedback effect on labour formality is not taken into account, which would likely lead to a convergence of incomes between formal and informal workers. Furthermore, a reform would present significant scope to make the tax system more progressive, which is not accounted for in these estimates.

Alternative financing mechanisms for employee contributions to the contributory health scheme would imply funding needs equivalent to 0.8% of GDP, based on 2017 household data. Workers with higher incomes, i.e. above 1.5 minimum wages, accounted for 90% of those enrolled in the private system, whose contributions are equivalent to 1% of GDP, and for these workers, the current social contributions could be simply replaced by personal income taxes of the same amount. From those enrolled in the public system, 70% have earnings below 1.5 minimum wages, leaving a remainder of around 0.8% of GDP to be financed from general taxation revenues instead of labour charges, as workers with incomes close to the minimum wage are unlikely to become subject to personal income taxation in the near future.

The proposed reforms in this chapter together would have a long-term net cost of 2.2% of GDP (Table 2.6). This takes into account the expected savings in spending on current cash transfer programmes. All the calculations in this section are an illustrative exercise, with the final cost depending on many minor details of the reform and its implementation. The implementation of such reforms can be gradual and should be accompanied by a comprehensive fiscal reform to achieve higher tax collection and progressivity (see Chapter 1), as already envisaged by the current authorities.

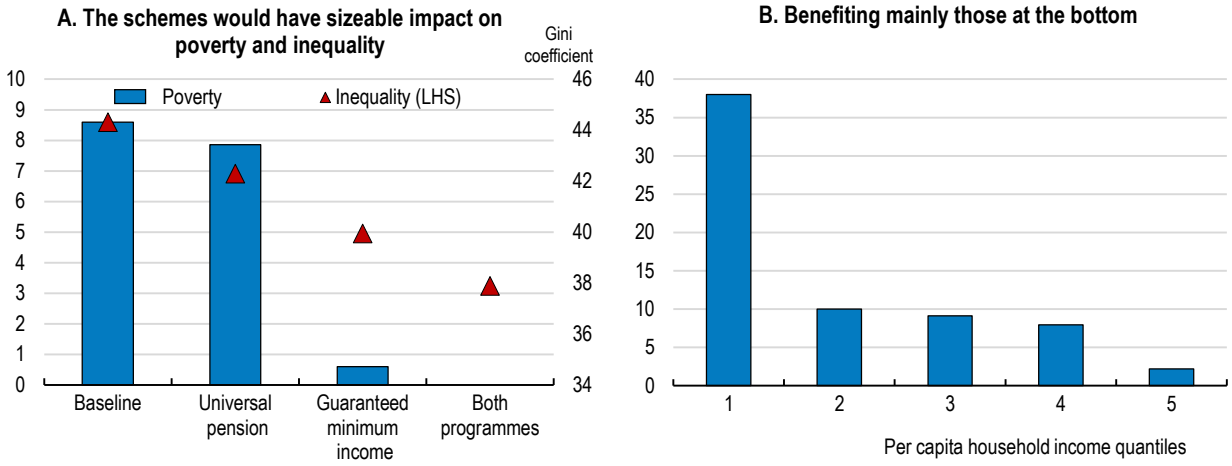
Table 2.6. Illustrative long-term fiscal costs of achieving universal social protection

New programme	Total cost (% GDP)	Current cost of programmes to be phased out (% GDP)	Net cost (% GDP)	Assumptions
Create a guaranteed minimum income to eradicate poverty	1.0	0.3	0.7	Cash transfer to supplement income up to established minimum income equivalent to the poverty line for the population under the age of 65 living in vulnerable households. The cash transfer is defined following this rule: S=GMI-0.8*household income
Increase the guaranteed minimum pension (PGU) to CLP 250 000	3.1	2.4	0.7	Same as current programme but higher cash transfer equivalent to 1.3 poverty lines. Fiscal cost estimated for 2050. The current programme is the existing guaranteed minimum pension equivalent to CLP 193 000 in 2022.
Phasing out health contributions to improve universal access to quality healthcare services through a single national health fund	0.8		0.8	For workers with higher incomes, i.e. above 1.5 minimum wages, the current health contributions are replaced by personal income taxes of the same amount
Total net cost			2.2	The net costs include the replacement of existing social cash transfers programmes by the new ones.

Note: The calculations imply subtracting from household income the existing programmes, such as *Ingreso Ético Familiar*, *Subsidio Único Familiar* y *Asignaciones Familiares*, and replacing them by the new proposed programme.
Source: OECD Secretariat calculations based on DANE-GEIH data.

The proposed reforms to reduce social contributions would boost formal employment permanently, due to the lower cost of formal employment relative to informal employment and capital. These reforms would induce firms of all sizes to hire more formal workers and the self-employed to become formal boosting productivity and growth. The higher employment formalisation and growth driven by these reforms would also increase tax collection helping to finance these reforms. Additionally, boosting productivity with structural reforms, as discussed in Chapter 1, would result also in higher employment and higher incomes for individuals and, in that way, increase tax collection.

Figure 2.27. Estimated impact on poverty and inequality of proposed social protection programmes



Note: The current situation includes the existing programmes in 2017. Calculations then assume that when a new programme is introduced replaces the old existing programme. *Solidarity Pillar* is replaced by the universal basic pension programme and the rest of cash transfers programmes by the new social programme (GMI or basic income).
Source: OECD secretariat calculations based on CASEN 2017.

StatLink https://stat.link/voamgd

MAIN FINDINGS	RECOMMENDATIONS (Key recommendations are bolded)
Expanding social assistance coverage	
Informal employment affects 30% of workers. This precludes them from access to many social security benefits, while reducing productivity and tax revenues.	Establish a comprehensive strategy to foster formalisation, including lower non-wage labour costs, better skills, stronger enforcement and improvements in tax administration.
The pandemic has highlighted significant gaps in social protection, particularly for informal workers. Income-support programmes are highly fragmented.	**Consider merging existing cash transfer programmes into a single conditional guaranteed minimum income scheme.**
The targeting system, *Registro Social de Hogares*, has improved, but often fails to reflect income changes in real time and leaves out some low-income households.	Continue improving the social household registry by merging in administrative databases, using real-time data and use the registry to allocate all benefits.
The unemployment insurance system has low coverage and fails to provide adequate support for low-income workers during unemployment.	Complement the single guaranteed minimum income scheme with top-up benefits from the existing contributory unemployment individual accounts.
Evaluation of performance of social assistance is still incipient, and results do not inform public policy.	Enhance regular monitoring and evaluation of social programmes and phase out those not working well or redundant.
Delivering better pensions	
Low-income pensions have improved due to a novel guaranteed minimum pension, but many middle income earners and women have inadequate old-age pension levels. Higher mandatory contributions raise the cost of formal job creation, driving many low-skilled workers into informality.	**Consider raising pension levels and applying a progressive contribution rate schedule, ensuring strong incentives for formal job creation.**
Remaining life expectancy at 65 has increased for males and females, whilst the retirement age has remained constant being lower for women (60) than for men (65) penalising pensions.	Align retirement ages for women and men and consider linking the retirement age to future increases in life expectancy.

Improving access to quality health services	
The underfunded public health system covers the disadvantaged population, while private insurers select the lowest risk individuals. Formal low-income workers pay contributions for public healthcare, while informal workers get almost the same benefit package for free.	**Improve universal access to quality healthcare services by pooling existing resources and distributing them more equally across insurance schemes, with stronger recourse to general taxation revenues.** Allow for voluntary private insurance contributions to top up health services.
Other labour market reforms to reduce informality	
A relatively high minimum wage reduces the prospects for low-income workers to obtain formal employment, particularly for women, young and rural workers.	Establish a permanent commission to provide guidance for future changes to the minimum wage, in line with changing labour market conditions and productivity.
The training system is only weakly aligned with labour market needs and vulnerable workers find it difficult to access to training courses.	**Embark in a full revision of training programmes, including the tax credit, to increase relevance and quality of training and improve targeting towards vulnerable workers.**

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CHILE

Chile's economy recovered swiftly from the pandemic on the back of exceptionally strong policy support, which eventually led to a significant overheating of the economy. Inflation has risen amid buoyant private consumption, further aggravated by the Russian aggression on Ukraine. Monetary authorities have acted swiftly to contain inflation, and the fiscal stimulus is being withdrawn. Looking ahead, main challenges for boosting productivity and investment include strengthening competition, reducing regulatory barriers and spending more on research and innovation, while pressing social needs call for more attention to how incomes and opportunities are distributed. Around a third of the workforce is in informal work, which limits their access to social protection benefits. Ensuring a well-defined set of benefits for all, with no distinction between formal and informal workers, will be key. Expanding access to high-quality early childhood education would improve educational outcomes and allow more women to work. Environmental challenges and risks loom large, but also provide significant opportunities for the future. The current high fossil content of the energy matrix contrasts with Chile's strong potential in renewable energy generation.

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