Executive summary

- Despite sharply lower copper prices, Chile’s economic growth has been resilient
- Growth needs to become more inclusive, especially for women
- School reform is on its way to lift student outcomes
Despite sharply lower copper prices, Chile’s economic growth has been resilient

A long period of strong economic growth has improved the well-being of Chileans and reduced poverty dramatically. The sound macroeconomic framework and flexible exchange rate made growth resilient in the face of large commodity price volatility, including the recent fall in copper prices. For growth to remain strong, Chile will need to further expand its economy beyond extracting natural resources, and increase its knowledge-based contribution to global value chains, including by undertaking productivity-enhancing structural reforms.

Growth needs to become more inclusive, especially for women

Despite strong economic growth, Chile remains a highly unequal society in terms of income, wealth and education. Inequality is passed from one generation to the next, reducing opportunities to climb the social ladder. Chile is now reforming its tax system to make it more progressive and expanding social programmes. Key reforms seek to reduce gender gaps and thus achieve a fairer society. But labour market duality still results in a very unequal wage distribution.

School reform is on its way to lift student outcomes

School enrolment is high, although the quality of education is uneven, and access to the best schools is reserved primarily for well-off families. Education is being reformed to create better opportunities for the less well-off. Skill mismatches appear high, reflecting education deficiencies that hold back productivity growth. The government’s education reform seeks to make schools more inclusive and reshape teacher careers. Efforts are underway to strengthen early childhood education and care, as well as increase the quality of primary, secondary and tertiary education. More investment in vocational education and training will be needed.
## EXECUTIVE SUMMARY

### MAIN CHALLENGES

<table>
<thead>
<tr>
<th>Address the high inequality of opportunity</th>
</tr>
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<tbody>
<tr>
<td>Persistent limited social mobility and high inequality</td>
</tr>
<tr>
<td>Low average levels of educational performance and a high degree of inequity across students</td>
</tr>
<tr>
<td>High labour market duality and weak participation rates of women, youth and minorities</td>
</tr>
<tr>
<td>Improving the pension system to reduce inequality</td>
</tr>
</tbody>
</table>

### KEY RECOMMENDATIONS

- **Strengthen policies to make growth more inclusive.**
- **Ensure that schools are more responsive to vulnerable students, especially by boosting the quality of outcomes.**
- **Approve the legislation to strengthen teachers’ career paths.**
- **Link funding for tertiary education to improved quality, especially for the least well-off students.**
- **Further expand availability and quality of early childhood education and care.**
- **Undertake a skills strategy to assess labour market needs and guide training and education policies.**
- **Reduce duality in the labour market between protected indefinite contracts and precarious fixed-term contracts.**
- **Increase the capacity of the pension system to provide better income support of the retired.**

### Pursue further regulatory and institutional reforms to boost trend productivity growth

- **Fully roll out the Productivity Agenda, to strengthen the capacity of dynamic firms to scale up and carry out innovative activities.**
- **Improve stakeholder input into the rule-making process and introduce systematic regulatory impact analysis.**
- **Further reduce the complexity of administrative procedures for business and simplify sector-specific regulations.**
- **Pass the competition bill that strengthens sanctions for cartels, reform the merger control regime and facilitate market studies.**

### Preserve resilience and help support sustained growth

- **While monetary policy should remain accommodative, fiscal policy should focus on gradual budget consolidation.**
- **Simplify the 2014 income tax reform, especially for businesses.**
- **Shift the tax base towards real-estate property and environmental damages; review the taxation of natural resources.**
- **Accelerate the adoption of Basel III banking regulation.**
Assessment and recommendations

- The economy has been more resilient than its peers
- Strengthening the inclusiveness of growth
- Boosting productivity and investment
The quality of life of Chileans has improved significantly over the last few decades, and along several dimensions of well-being it approaches the OECD average, notably jobs and earnings, work-life balance and health (Figure 1, Panel A). The increase in average disposable income and reduction in poverty (Panel B) has been among the most rapid in the OECD, as a consequence of economic reforms, such as trade and investment liberalisation, and the sound macroeconomic policies that have controlled inflation and smoothed economic cycles, reducing uncertainty and encouraging investment. Continued progress will require further

**Figure 1. Incomes have risen and well-being is high in many dimensions**

1. The civic engagement and governance dimension is based on: a) consultation in rule-making; and b) voter turnout. Chile has a low score on both measures. However, voter turnout was much higher prior to the latest election, when it was made non-compulsory.

2. The national poverty headcount ratio for a family of four represents a family income below CLP 361 311 per month, in 2013.

*Source: OECD, Well-being Indicators Database; OECD, Productivity Database; and DataStream.*

StatiLink for figure [here](http://dx.doi.org/10.1787/888933302171)
economic transformation towards a more knowledge-based and innovative economy, with more firms capable of participating and upgrading their activities in global value chains. Further improvements in well-being will also need to address the sizable gaps that remain in many well-being indicators across social groups and between sexes (Table 1).

Table 1. Well-being indicators

<table>
<thead>
<tr>
<th>Women and men throughout their lifetime</th>
<th>AND IN THE OECD?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health status</strong></td>
<td></td>
</tr>
<tr>
<td>Life expectancy at birth (years)</td>
<td>81</td>
</tr>
<tr>
<td>Share of people in good/very good health conditions</td>
<td>51%</td>
</tr>
<tr>
<td><strong>Education and skills</strong></td>
<td></td>
</tr>
<tr>
<td>Tertiary degrees awarded (all fields)</td>
<td>57%</td>
</tr>
<tr>
<td><strong>Women and men in paid and unpaid work</strong></td>
<td></td>
</tr>
<tr>
<td>Employment rates (tertiary educated individuals)</td>
<td>71%</td>
</tr>
<tr>
<td><strong>Women and men in society</strong></td>
<td></td>
</tr>
<tr>
<td>Civic engagement and governance</td>
<td></td>
</tr>
<tr>
<td>Share of seats in national parliament</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Personal security</strong></td>
<td></td>
</tr>
<tr>
<td>Share of people feeling safe when walking alone at night</td>
<td>49%</td>
</tr>
<tr>
<td><strong>Subjective well-being</strong></td>
<td></td>
</tr>
<tr>
<td>Levels of life satisfaction on a 0 to 10 scale</td>
<td>6.6</td>
</tr>
</tbody>
</table>

Source: OECD (2014), How’s Life in Chile.

The government has embarked on an ambitious reform agenda to tackle these challenges. The present report reviews and discusses these reforms, in particular:

- In order to make growth more inclusive, reform taxes, childcare, labour rules, and also reduce gender gaps.

- A major revamp of the education system would improve social mobility and boost productivity.

- The ambitious agenda to boost productivity, innovation and growth is welcome.

The economy has been more resilient than its peers

The economy is in the midst of a challenging rebalancing process. As the largest producer of copper in the world, Chile benefited immensely from the upswing in commodity prices and the environment of low international interest rates during the recent commodity supercycle. The commodity price boom induced a macroeconomic cycle through its effect on investment (Fornero et al., 2014). Since mining is very capital intensive, investment grew from approximately 2% of GDP in 2002 to almost 7% of GDP in 2012, generating large spillover effects on other sectors, in particular construction. However, the long phase of increasing commodity prices has reversed: copper prices have weakened, and will likely remain at a lower level in the future. The combination of lower copper prices and higher costs has affected mining profitability, sharply reducing investment (Figure 2). Lower terms of trade have also cut household incomes and reigned in private consumption. As a result, output growth slowed sharply in 2014.
The large depreciation of the exchange rate has put upward pressure on prices, although inflation expectations remain well-anchored. Inflation rose to 4.7% in 2014, above the Central Bank’s tolerance range of 2 to 4%, and has remained high for a number of quarters (Figure 3). The depreciation of the exchange rate has had a significant effect on net exports, mainly through its impact on imports. However the stimulus to exports has been less than expected. This was the result of several factors. First, the depreciation of the peso has been driven in part by the appreciation of the dollar which has affected all currencies, in particular in Latin America, where other currency depreciations have been substantially higher than those of Chile – notably Brazil and Colombia. Second, external demand has weakened, especially in China and Latin America, more than counterbalancing the expansionary effect of the peso depreciation. Finally, the exchange rate elasticity of industrial exports has likely declined over time, in part as a result of the further integration of trade linkages (Ahmed et al., 2015).
With headline inflation exceeding the policy target, the central bank raised interest rates from 3% to 3.25% in mid-October 2015. However, given the downside risks to the recovery and well-anchored inflation expectations, monetary policy can remain accommodative. Raising interest rates further in the near term may not be necessary, because recent inflation has been mainly associated with exchange rate depreciation, which the rebalancing process needs, and is not linked with supply-side pressures. Indeed, the weakening local and external activity and recent decrease in commodity prices suggest that pressure on prices should diminish. But if expectations persistently exceed the target, some further monetary tightening may be warranted.

Despite the substantial slowdown of output and domestic demand, unemployment has remained relatively stable at low levels (Figure 4). Annual wage growth accelerated, reaching a relatively high rate, but has begun to decline. This apparent discrepancy between relatively weak output and strong labour market performance has generated some degree of concern, to the extent that it could be an indication that the economy’s spare capacity is smaller than widely thought, and therefore, that high inflation may be more persistent than projected.

A fiscal impulse to the economy has taken place in 2015, mainly via automatic stabilisers, which are allowed to operate freely according to Chile’s fiscal rule. Central government spending has increased by 8.4% from last year, mainly funded by tax increases. The authorities feel that fiscal consolidation is warranted to adjust to the permanent negative shock income shock generated by lower copper prices. However, this consolidation should be carried out gradually to smooth its social impact, and adjusted if necessary in light of the pace of recovery. The 2016 budget foresees an increase in expenditure of 4.4%, only half the growth of 2015.

The recent slowdown in activity and currency depreciation have had little impact on the balance sheets of corporations, thanks in part to limited currency mismatch (Central Bank of Chile, 2015a). Some bank payment indicators have deteriorated, most notably medium-sized ones, but in general, bank financial indicators are stable (see Table 3 below) and stress tests suggest that capital levels are sufficient to confront a severe stress
scenario. Bond issues by the banks contributed to the diversification of funding sources, although medium-sized banks are highly dependent on wholesale funding. Finally, the high levels of capitalisation could weather the materialisation of a severe stress scenario.

Output is expected to grow by 2.2% in 2015, sustained by a fiscal impulse, and accelerate to 2.6% in 2016 and 3.3% in 2017, as private domestic demand gradually strengthens (Table 2). Exchange rate depreciation will likely induce a substantial growth in exporting activities. A significant number of workers may move from mining to other sectors that gain in competitiveness. Many workers may need retraining, and, very likely, relocation from mining regions to other locations.

**Chile faces several medium-term uncertainties**

Chile faces potential medium-term uncertainties from external and internal sources. The most substantial is probably a larger-than-expected slowdown in China, destination of one-quarter of Chile’s exports (Figure 5), about 80% of which are copper-related. Simulations by the OECD suggest that a two percentage point reduction in the growth rate of domestic demand in China would result in a one-half percentage point reduction in Chile’s GDP growth. Knock-on effects could make this even larger. Brazil remaining in the current deep recession also poses an important demand risk, given its important regional role. Further shocks that Chile could face include those from copper prices, the inevitable rise in interest rates by the US Federal Reserve, and the consequences of natural disasters. Most of these shocks could have strong negative consequences (Box 1).

**The fiscal rule has worked well but could be made more robust**

The fiscal rule helped Chile to run current account surpluses during much of the commodity boom. Fiscal surplus rose from 2% in 2004 to over 7% of GDP in 2007, allowing the country to save more than 10% of GDP in its sovereign wealth funds. Then the surpluses switched to deficits as a result of the countercyclical response to the 2009 global financial crisis, reconstruction spending related to the 2010 earthquake and tsunami, and the increase in production costs in mining and the internalisation of what then seemed to
be permanently higher commodity prices (Figure 6). Nevertheless, the fiscal situation remains robust – notably by the near absence of net debt – which gave the government some room to act counter-cyclically and sustain aggregate demand in response to the 2014 slowdown in activity.

The public financial management framework is robust, but could be enhanced to improve transparency and accountability. For instance, the government’s public finance reports describe short-term and long-term fiscal policy, including contingent liabilities and growth and spending assumptions, which have proven useful to assess the fiscal stance. But to provide more predictability, medium-term budget targets could be embedded in the rule itself and be consistent with maintaining a strong government net financial position.

Table 2. Macroeconomic indicators and projections
Percentage changes, constant prices

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>GDP</td>
<td>129 028</td>
<td>4.3</td>
<td>1.8</td>
<td>2.2</td>
<td>2.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Private consumption</td>
<td>80 665</td>
<td>5.9</td>
<td>2.2</td>
<td>1.8</td>
<td>2.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Government consumption</td>
<td>15 674</td>
<td>3.4</td>
<td>4.4</td>
<td>4.2</td>
<td>3.9</td>
<td>2.6</td>
</tr>
<tr>
<td>Gross fixed capital formation</td>
<td>31 044</td>
<td>2.1</td>
<td>-6.1</td>
<td>-1.3</td>
<td>0.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Housing</td>
<td>4 260</td>
<td>-1.4</td>
<td>1.7</td>
<td>2.2</td>
<td>2.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Final domestic demand</td>
<td>127 383</td>
<td>4.6</td>
<td>0.5</td>
<td>1.4</td>
<td>2.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Stockbuilding1</td>
<td>1 900</td>
<td>-0.9</td>
<td>-1.1</td>
<td>0.4</td>
<td>-0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Total domestic demand</td>
<td>129 284</td>
<td>3.9</td>
<td>-0.5</td>
<td>2.0</td>
<td>2.0</td>
<td>3.3</td>
</tr>
<tr>
<td>Exports of goods and services</td>
<td>44 266</td>
<td>3.4</td>
<td>0.7</td>
<td>-2.6</td>
<td>1.7</td>
<td>4.0</td>
</tr>
<tr>
<td>Imports of goods and services</td>
<td>44 522</td>
<td>1.7</td>
<td>-7.0</td>
<td>-3.3</td>
<td>1.9</td>
<td>3.9</td>
</tr>
<tr>
<td>Net exports1</td>
<td>-256</td>
<td>0.6</td>
<td>2.5</td>
<td>0.2</td>
<td>0.0</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Other indicators (growth rates, unless specified)

- Potential GDP
- Output gap2
- Employment
- Unemployment rate
- GDP deflator
- Consumer price index
- Core consumer prices
- Household saving ratio, net3
- Current account balance4
- Terms of trade
- Central government financial balance4
- Central government gross debt4
- Central government net assets (only treasury assets)4, 5
- Central government net assets (all financial assets)4, 6
- Three-month money market rate, average
- Ten-year government bond yield, average

1. Contribution to changes in real GDP.
2. As a percentage of potential GDP.
3. As a percentage of household disposable income.
4. As a percentage of GDP. Only central government data is available.
5. Only includes treasury assets (ESSF, PRF, Education fund and other treasury assets).
6. Includes treasury assets and other government financial assets (cash, temporary investment and other claims).

Source: OECD Economic Outlook 98 database, and Dirección de Presupuestos (DIPRES).
The Fiscal Advisory Council was created in 2012 – a welcome step, but its institutional design could be strengthened in accordance with best practices. Greater autonomy for the Council should be built in a fiscal responsibility law to ensure independent assessment of compliance with the fiscal rules in the future.
Figure 6. **The government’s fiscal and financial positions remain sound**

**A. Headline and structural balance**

- **Structural balance**
- **Headline balance**

**B. Government financial position**

**C. Copper prices**

1. Net assets calculation includes only treasury assets [Economic and Social Stabilization Fund (ESSF), Pension Reserve Fund (PRF), Fund for Education (FpE) and other treasury assets].

Source: Central Bank of Chile, Ministry of Finance and Chilean Copper Commission, Ministry of Mining.

StatLink: [http://dx.doi.org/10.1787/88893302221](http://dx.doi.org/10.1787/88893302221)
Banking supervision could be further strengthened

The government must continue to modernise the institutional framework of financial supervision. Today, the superintendents of banks and securities are selected by the president and appointed at the beginning of each presidential term, with no justification required for dismissal. The government has submitted a bill to Congress to enhance the independence of the securities and insurance regulator (SVS) by establishing a commission that would include some members with terms independent of the political cycle and require more transparent justification for dismissal. The government has also publicly compromised sending a new Banking Law to Congress before the end of 2015 that, among other things, will grant more independence to the banking and financial institution regulator (SBIF).

Furthermore, unlike other emerging economies which are already implementing the Basel III recommendations on bank capital, Chile has yet to define a timeline or make an implementation plan. The government is expected to send a new Banking Law to Congress before the end of 2015, which will adapt Basel III recommendations to the Chilean case. It is important that these recommendations are implemented to avoid major regulatory discrepancies between domestic and foreign banks, considering that the parent companies of European banks operating in Chile are already implementing Basel III. The changes should be implemented gradually, taking into account the cyclical position of the economy. Although non-performing loans (NPLs) are generally not a problem (average NPL ratio of around 2%), and banks are generally well-capitalised (core equity ratio of around 10%), it is nonetheless expected that some banks would fall short of the Basel III standards regarding total capital ratios (Table 3). However, a more detailed analysis at the level of individual banks is needed.

Table 3. Financial indicators
% unless otherwise stated

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consolidated banking system</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit growth (real annual change)</td>
<td>5.1</td>
<td>12.9</td>
<td>11.6</td>
<td>11.0</td>
<td>4.8</td>
</tr>
<tr>
<td>Mortgage credit growth (real annual change)</td>
<td>9.0</td>
<td>8.1</td>
<td>8.9</td>
<td>10.2</td>
<td>10.3</td>
</tr>
<tr>
<td>NPL ratio (non-performing loans/total loans)</td>
<td>2.7</td>
<td>2.4</td>
<td>2.2</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Provisions (provisions/total loans)</td>
<td>2.5</td>
<td>2.3</td>
<td>2.3</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Capital adequacy (regulatory capital/risk-weighted assets)</td>
<td>14.1</td>
<td>13.9</td>
<td>13.3</td>
<td>13.3</td>
<td>13.4</td>
</tr>
<tr>
<td>Return on equity (ROE)</td>
<td>18.6</td>
<td>17.4</td>
<td>14.5</td>
<td>14.9</td>
<td>17.2</td>
</tr>
<tr>
<td><strong>Corporate and household sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate indebtedness (% GDP)</td>
<td>84.2</td>
<td>89.1</td>
<td>94.7</td>
<td>102.1</td>
<td>109.6</td>
</tr>
<tr>
<td>Household indebtedness (% Income)</td>
<td>57.3</td>
<td>55.9</td>
<td>54.7</td>
<td>57.1</td>
<td>60.8</td>
</tr>
</tbody>
</table>

**External sector**

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross external debt (% GDP)</td>
<td>35.9</td>
<td>42.7</td>
<td>44.7</td>
<td>50.7</td>
<td>60.1</td>
</tr>
<tr>
<td>External debt (foreign liabilities/assets)</td>
<td>8.2</td>
<td>9.3</td>
<td>8.0</td>
<td>8.8</td>
<td>8.8</td>
</tr>
<tr>
<td>International reserves (millions USD)</td>
<td>27 864</td>
<td>41 979</td>
<td>41 650</td>
<td>41 094</td>
<td>40 447</td>
</tr>
</tbody>
</table>

Source: Central Bank of Chile.

Non-financial corporate and household debt has increased, driving the debt-to-GDP ratio of non-financial firms to around 100% in 2014. This level is higher than that of other emerging economies but still lower than many OECD countries. Household debt also rose to about 60% of disposable income in 2014, driven by higher mortgage debt. This could be in part a result of
households bringing forward their home purchasing in anticipation of the scheduled increase in VAT on housing from 2016. Despite higher debt, household debt service-to-income ratios have remained at low level due to low interest rates. In the case of mortgages, loan-to-value ratios have been declining (Central Bank of Chile, 2015b).

The increase in non-financial corporate debt does not necessarily imply a significant risk to financial stability thanks to a series of mitigating factors. First, rollover risks seem moderate, as the average time to maturity of outstanding debt is around 15 years. Second, the increased reliance on foreign currency funding does not seem to be associated with greater currency mismatches. Third, firms with large net foreign currency liabilities are usually associated with significant natural hedges. Finally, a large portion of this foreign currency debt is FDI related, which is typically less sensitive to external financial shocks.

**Recalibrating some aspects of the reform agenda could contribute to raising business confidence**

Addressing the recent loss of business confidence will be important to aid in the return to stronger growth (Figure 7). Although the decrease in confidence is mainly explained by lower commodity prices and the normalisation of US monetary policy, it also reflects some uncertainty in the business community about certain aspects of the government's reform agenda, including the tax reform in particular, which has been seen as further complicating the corporate tax system. The administration has sought to temper this uncertainty in several dimensions. In the case of the tax reform, it is defining more clearly who needs to follow which accounting rules under the new hybrid tax system.

![Figure 7. Consumer and business confidence has deteriorated](http://dx.doi.org/10.1787/88893302239)

**Strengthening the inclusiveness of growth**

Stronger economic growth in Chile needs to be complemented by a reduction in inequality in order to make the gains more inclusive. Although poverty has been reduced dramatically, inequality as measured by the Gini after taxes and transfers remains the highest in the OECD (Figure 8). Even after including estimated in-kind transfers from education and health, a large gap remains with other countries. The current Chilean
administration has adopted an ambitious policy agenda to tackle inequality. This includes a tax reform to raise more revenue and expand social programmes; a labour reform to promote a more inclusive labour market; and an education reform to build more inclusive schools and reduce skill gaps across socio-economic groups.
**Better quality and equity of compulsory education is the linchpin of inclusive growth**

Education and skills development can play a key role in reducing income inequality and increasing growth. The inability of individuals from poor socio-economic backgrounds to access higher education and develop their human capital causes income inequality to perpetuate over time, lowering economic growth (Causa and Johansson, 2010). In the long run, education has among the largest effects on economic growth (Barnes et al., 2011; OECD, 2015a). Evidence shows that growth is directly and significantly related to the skills of the population (Hanushek and Woessmann, 2015), and with collective cognitive skills is by far the most important determinant of a country’s economic growth (Figure 9).

Figure 9. Better quality of education increases economic growth

![Figure 9](http://dx.doi.org/10.1787/888933302251)

*Source: OECD (2015i), Universal Basic Skills: What Countries Stand to Gain.*

**How to read this figure:** This figure depicts the fundamental association between annual growth in real per capita GDP between 1960 and 2000 and average test scores, after controlling for differences in initial per capita GDP and initial average years of schooling. Countries align closely along the regression line that depicts the positive association between cognitive skills and economic growth.

In Chile, despite significant progress over the last decades attracting more students to the education system, performance remains below most OECD countries (Chapter 2). The average student in Chile has a PISA score in reading, math and science that is much lower than the OECD average and one of the lowest in the OECD. And the average difference in results, between the students with the highest socio-economic background and the students with the lowest socio-economic background, is also significantly higher than the OECD average. Chile also has a significant proportion of young people that are unable to fully attain basic skills in PISA exams (420 points on the PISA mathematics scale), which is assumed to represent the minimum skills necessary for participating productively in modern economies (Figure 10).
The potential gains of attaining universal skills – all students fully attaining 420 points in the PISA mathematics scale – can be very large. As discussed in Chapter 2, OECD estimates suggest that while ensuring universal schooling at the current level of quality yields small economic gains, improving quality of schools so that each of the current students attains basic skills by 2030 can have a much stronger impact on the economy. In particular, Chile’s annual economic growth can increase by 0.48 percentage points per year (an increase of 7% in real GDP by 2030). And if the two previous scenarios are combined, the increase in the annual growth rate of GDP would be 0.57 percentage points (which means that real GDP will be 8½ per cent higher by 2030). Furthermore, achieving universal basic skills has a complementary impact on reducing inequality (OECD, 2015i).

To attain universal basic skills, Chile could benefit from a comprehensive and consistent Skills Strategy. This strategy must begin with a focus on the early years is crucial in addressing socio-economic differences. Early learning confers value on acquired skills, which leads to self-reinforcing motivation to learn more (Heckman, 2013). Indeed, Chile's
government has assigned special priority to expanding the coverage of quality services for early childhood. To this end, a law making kindergarten universal was enacted in 2013, and the government has made expanding early childhood education a high priority. The Nueva institucionalidad de la Educación Parvularia aims to increase the coverage of preschool education throughout Chile, and to improve and monitor quality through the creation of a Secretariat for Childhood Education and a division for preschool education at the education superintendency. The government created, in a first stage, over 500 new day care facilities across the country. This provides more than 10 000 children between zero and two years old with access to early childcare and education. Furthermore, in the next four years, more than 3 000 day care facilities are to be created, which should bring Chile closer to the OECD in terms of coverage.

A second pillar of the skills strategy should be to build more inclusive schools and improve their quality. The school voucher system that was introduced in 1981 allowed school choice among students, including for attending private schools. This triggered 1 000 private schools to enter the market and boosted the private enrolment rate by 20 percentage points. Empirical evidence shows that this policy led to increased sorting between students and schools and less improvement in terms of quality, partially because schools were allowed to choose students (Hsieh and Urquiola, 2006). As a result, students from lower socio-economic background are disproportionally placed in schools that perform poorly, widening inequities. In contrast, when schools cannot select students based upon their ability, strong competition between them encourages entry by high productivity schools and improves the average skill levels of students (MacLeod and Urquiola, 2009). To address practices that hinder equity and also target low-performing schools and disadvantaged students, the administration proposed and Congress has passed the Inclusion and Equity Law, which aims to stop selection of students by (public and private) subsidised schools, disallow for-profit schools, and eliminate co-payments.

To improve quality Chile also needs to set funding mechanisms that respond to the students’ and schools’ needs. The level of education spending in Chile at 6.9% of GDP is slightly above the OECD average level of 6.1%. However, spending per student is much lower, at around USD 32 250 (Figure 11). Empirical evidence shows that below around USD 50 000 (at PPP), higher spending per student is associated with better performance, suggesting that increasing spending may improve educational quality (OECD, 2015i). Funding across schools is highly uneven, and often tied to local taxes. Chile needs to develop a better methodology for funding schools, so that it focuses on those that have the greatest needs. The Inclusion and Equity Law increased funds for vulnerable students (using a differentiated voucher called Subvención Escolar Preferencial), and extended this voucher to middle class students. This positive development is reinforced by the recent implementation of a new institution responsible for auditing and supervising school providers (Superintendencia de Educación).

Finally, to improve the quality of compulsory education Chile needs to strengthen the teaching profession by better defining what teachers can expect as professionals throughout their careers, and providing adequate conditions that allow and motivate teachers to improve. The country currently has a large shortage of qualified teachers, particularly in rural schools, public schools and in schools that receive students from disadvantaged backgrounds. In this regard, a bill was introduced to Congress in 2015 that would reform new teacher certification requirements, and introduce a teacher evaluation process, a salary scale and clarified teacher workloads. It also raises the requirements to enter teaching and heightens demands on educational institutions, to ensure that graduates have the
knowledge and skills to teach, significantly increasing compensation early in teaching careers, even above the average of the salaries of other university graduates, and further increasing as one moves up the salary scale through certification, and provides mentoring to young teachers. These important reforms are discussed further in Chapter 2.

**Tertiary education reform should focus on access and quality**

To promote equity and increase productivity further, the tertiary education system must be accessible to good students from low income and disadvantaged groups, and quality needs to be improved. In recent decades Chile has made significant progress to expand access to tertiary education. However, since the gap between enrolment among the top and bottom income quintiles remain large, efforts need to be enhanced to ensure that students from low socio-economic background can access tertiary education. Moreover, public funding needs to be linked to positive evaluation of quality, to ensure that enrolment translates into better career prospects. Without such actions, the cycle of inequality will perpetuate over time as there is a strong correlation between tertiary education attainment and socio-economic family background in Chile (Figure 12).

Figure 11. **Average spending per student between the ages of 6 and 15 is low**

1. Spending is measured in USD PPPs in the year 2012. Source: OECD, Education at a Glance Database.

For socio-economically disadvantaged youth, better measures to remove financial barriers to undertaking higher education are required. Across OECD countries, the most common approach is public funding through direct loans. An alternative, which has been used in Chile, is private funding leveraged by the government. In 2012, the government started subsidising interest rates and making repayment income-contingent. To reduce financial constraints to students from lower income families, the government is considering providing free higher education, from 2016, to all students from families that are in the bottom half of the income distribution, that are enrolled in institutions that fulfil some quality and governance requirements. This would certainly help reduce financial constraints to access tertiary education for many students from middle and lower income families. However, this policy will be very costly and will likely not guarantee that lower income students will be able to access and graduate from tertiary education.
Figure 12. Access to tertiary education has improved but remains unequal

A. Educational mobility is low

B. Enrolment in tertiary education has increased faster than in the average OECD country

C. Coverage of tertiary education has increased at all levels of income but gaps remain large

Note: “Gross enrolment” in Panel B is the ratio of students of all ages that attend tertiary education and students within the official age group. Thus, if there is late or early enrolment, or repetition, the total enrolment can exceed the population of the age group that officially corresponds to the level of education – leading to ratios greater than 100%.


http://dx.doi.org/10.1787/88893302289
Improving the financial terms of the existing income contingent loan system to make it more attractive would help. In some OECD countries (including Australia, New Zealand and the United Kingdom) income-contingent loan systems achieve a good balance between effective cost recovery on the government side and the risks to the borrower of being unable to repay student loans. Income-contingent loans are also more equitable, since graduates’ payments are in direct proportion to their income. But this is not enough.

Resolving financial constraints will not alone solve the inequality challenge in tertiary education. Evidence shows that low high school quality and grades, as well as insufficient parental involvement, pose higher obstacles to attending university than financial constraints (Frenette, 2007). To increase access to quality tertiary education the key is to focus on the right implementations of the reforms to improve compulsory education. But Chile should also seek to reduce horizontal inequalities, which relate to the kind of institutions and programmes students attend that determine subsequent labour market opportunities. Some population groups are systematically tracked into categories of institutions and programmes that are less resourced or recognised in terms of labour market rewards. This explains why many students in Chile express ex post regret over excessive student loan debt relative to their earnings potential. A possible explanation is that some students base educational choices on limited or inaccurate information on the costs and benefits of studying different subjects. Low-income students would also benefit from more support in the transition from secondary to tertiary education. Better career guidance and improved information about likely job prospects can help youth make informed decisions about the field of study they might like to specialise in, and help them to choose the best educational institution for them to attend.

A skills strategy would help to address mismatch problems

Differences in skill mismatch across countries are a major driver of low productivity growth (Adalet McGowan and Andrews, 2015). Evidence shows that skill mismatch is relatively high in Chile (Randstad Workmonitor, 2012). Integrating more people in the labour markets requires education systems that are flexible and responsive to the needs of the labour market, and young people having access to high-quality career guidance and further education that can help them to match their skills to prospective jobs. Chile should develop work-based learning programmes across different levels and types of education to better integrate students into the labour market. For instance, making internships compulsory to validate some university qualifications, like in France, or integrating work-based training into the university curricula, like in many UK universities, can enhance graduates’ employability.

But university is not the only route to pursue further education. One way to prepare students for the labour market is through vocational education and training (VET) systems that aim at providing the technical skills needed for the labour market. The Chilean VET system provides learning opportunities in remote regions and support for students at risk and plays a key role in up-skilling and integrating young people into the labour market. But the system size remains among the smallest in the OECD. The government could thus establish a formal consultation framework between employers, unions and the VET system, adopting quality standards and apprenticeships to support and expand workplace training as an integral part of vocational programmes. It could also provide pedagogical training to VET teachers before they start teaching and develop the capacity to analyse and use data on labour market needs to guide the design of policies and improve decision making.
**Tax reform for a more inclusive Chile**

Chile’s tax revenues are comparatively low. At 20.2% of GDP, Chile’s tax-to-GDP ratio was the second lowest in the OECD in 2013, where the average is 33.7% of GDP. The narrow tax base and heavy dependence on indirect taxes greatly constrains public revenues, and explains why the level of expenditure on public goods has been insufficient to reduce inequality. More social expenditure is financed privately in Chile than in most OECD countries. Before the tax reform, important tax exemptions mainly benefitted higher-income earners and left a large share of natural resource rents untaxed. Evidence shows that, in practice, evasion and avoidance by the top income earners has been a significant contributor to the low impact of income taxes (Fairfield and Jorratt, 2014). Moreover, personal income tax revenues – while they have increased in recent years – remain very low.

The government introduced a major tax reform in 2014 that entered partially into force the last quarter of 2014, though some provisions will be phased in over the 2015-17 period. The law contains various provisions including (see O’Reilly et al., 2015):

- Extensive changes to the corporate income tax.
- A reduction in the top personal income tax rate from 40 to 35%.
- Broadening of the base of VAT on real estate.
- Increases in health-related taxes.
- Increased taxation of carbon and other pollutants.
- Measures to strengthen tax administration, improve compliance, reduce Base Erosion and Profit Shifting (BEPS), and deter evasion and avoidance.

The tax measures aim to raise an extra 3% of GDP. More than half of the increased revenues are forecasted to come from increased income taxation (1½ per cent of GDP), mainly from corporate income. Increases in compliance are forecast to increase revenues by 0.52% of GDP, while expansions in the VAT base will account for 0.36% of GDP (Table 4).

<table>
<thead>
<tr>
<th>Measure</th>
<th>% of the projected revenue increase</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in collection due to plan to decrease tax evasion and avoidance</td>
<td>17.2</td>
<td>0.52</td>
</tr>
<tr>
<td>Other (taxing capital income of real estate, restrictions on deemed income system, etc.)</td>
<td>3.6</td>
<td>0.11</td>
</tr>
<tr>
<td>Effect of the repeal of several measures</td>
<td>3.3</td>
<td>0.10</td>
</tr>
<tr>
<td>Historical FUT incentive</td>
<td>1.7</td>
<td>0.05</td>
</tr>
<tr>
<td>New tax on contaminating motor vehicles</td>
<td>1.7</td>
<td>0.05</td>
</tr>
<tr>
<td>Effect tax change on alcoholic and non-alcoholic beverages</td>
<td>2.0</td>
<td>0.06</td>
</tr>
<tr>
<td>New tax on source emissions (CO₂, NOₓ, PM)</td>
<td>2.3</td>
<td>0.07</td>
</tr>
<tr>
<td>Fiscal traceability of specific taxes and mining tax auditing</td>
<td>2.6</td>
<td>0.08</td>
</tr>
<tr>
<td>Taxing the sale of new properties and limiting the use of special VAT credit</td>
<td>11.9</td>
<td>0.36</td>
</tr>
<tr>
<td>Raising the stamp tax from 0.004 to 0.008</td>
<td>4.6</td>
<td>0.14</td>
</tr>
<tr>
<td>Change of tobacco tax</td>
<td>4.3</td>
<td>0.13</td>
</tr>
<tr>
<td>Corporate income tax</td>
<td>48.3</td>
<td>1.46</td>
</tr>
<tr>
<td>Decrease in collection due to saving incentives and others</td>
<td>-3.6</td>
<td>-0.11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>3.02</strong></td>
</tr>
</tbody>
</table>

Source: Ministry of Finance of Chile.
The tax reform will help to reduce inequality by shifting the share of national income received by the top 1% of the population from 16.5% to 15.5% of GDP (World Bank, 2015). The reform increases tax progressivity, eliminates tax expenditures and fights tax evasion and avoidance. The envisaged gradualism of implementation is welcome, and it will remain important to monitor the effects on investment and savings, and be ready to adjust the reform if warranted.

The core of the tax reform will hike the statutory corporate tax rate by 7 percentage points, in Chile’s semi-integrated tax system (O’Reilly et al., 2015). Although the overall tax burden is relatively low, the increase in the corporate tax rate will reposition Chile from one of the lowest corporate tax jurisdictions in the OECD to among the higher ones. Empirical evidence suggests that corporate taxes are the most damaging for economic growth, as they depress investment rates and reduce labour productivity (Arnold et al., 2011). However, Chile’s semi-integrated system allows capital owners to use 65% of the corporate income tax as a credit for their personal income tax. While the reform’s main goal is to raise additional revenue for social expenditure, further measures could be envisaged to improve the overall design of the tax system in the future. Notably, the personal income tax base is very narrow (OECD, 2013), in part due to the highly skewed income distribution. Taxes on real estate or immovable property remain underused, and would have lower efficiency costs. Helpfully, the reform already included a shift towards environmental taxes, in line with OECD recommendations, and such taxes that internalise negative externalities can be expanded in the future.

**Improving the pension system is important to address inequality**

In most OECD countries, pensions explain a large share of the overall redistributive impact of the tax and transfer system (OECD, 2012). In Chile, however, contributory pensions do not help to reduce inequality, as the Gini coefficient before and after pension contributions is very similar (Lustig, 2015). Although Chile’s old-age pension system has reduced elderly poverty from around 23% in 2008 to 20% in 2011, thanks to a key reform in 2008 that enhanced the generosity of the pension system – by introducing an anti-poverty or “solidarity” pillar – the average pension remains only 15% of average earnings, although the standardised replacement rate is higher. Pensions are modest because they are primarily financed by mandatory contribution rates that remain low (10% of earnings – compared to 20% on average in the OECD), and low contribution patterns due to inconsistent work histories. Pensions become available for men at the age of 65 (same as the OECD average) and to women at the age of 60 (OECD average of 64).

The Chilean government set up an expert commission (Comisión Asesora Presidencial sobre el Sistema de Pensiones) to assess the pension system, identifying its strengths and limitations, and elaborate a set of remedies (Bravo et al., 2015). The commission examined a wide range of issues, but focused particularly on the large number of future pensioners who have low contribution densities. Overall, half of men have contribution densities lower than 47.5%, and half of women have densities of less than 12.8%. These low contribution histories are associated with work histories that include periods of self-employment, informal employment, unemployment or professional inactivity, and are particularly a problem for women and individuals in low income brackets.

The recommendations of the expert commission are highly consistent with OECD best practices. To make the pension system more sustainable and improve replacement rates, the required contribution rates should be gradually raised from 10% to 14%. In addition, to
make the system more inclusive, reforms could focus on increasing the level of the solidarity pension (available to the bottom 60% of households), to improve replacement rates, notably for women and the poor. Changes in the system should increase the statutory retirement age, equalise the retirement age of men and women at 65 years, and periodically review the retirement age to be consistent with life expectancy. Finally, pension fund administration could be made more cost effective. These features are a key feature of sustainable pension systems. Programmes that interact with the pension system, and reduce the amount and incentives to contribute, such as social programmes Fonasa and Family Allowance, need to be revised. Reforms should also remove the modality of programmed retirement pension to avoid decreasing pensions over time, by encouraging annuitisation.

**Labour reform should focus on protecting workers for a more inclusive labour market**

High wage inequality in Chile is an important driver of overall inequality. Indeed, evidence shows that income inequality before taxes and transfers reflects mainly differences in labour market outcomes, as they account for around 75% of household income inequality across OECD countries, much more than the 25% accounted by self-employment and capital income combined (OECD, 2012). In part, this is because some of the countervailing forces and labour market institutions that favour redistribution in Chile, principally unions, collective bargaining mechanisms and statutory minimum wages, have a limited reach. As a result, union density and coverage are relatively low, and strongly concentrated in the public sector, affecting the wage distribution (OECD, 2011). Therefore, the proposed labour reform that would bring collective bargaining processes closer to those of other OECD countries makes sense (Chapter 1). Notably, clarifying the right to strike is a step forward to protect workers’ rights, but it should be balanced.

The reform focuses almost exclusively on collective bargaining rules, and does not address the high degree of labour market duality that is a consequence of imbalanced protection of regular employment contracts as compared with temporary contracts. This divergence in protection creates duality in the labour market that feeds high job turnover and precariousness (Figure 13). Current legislation provides strong protection for employees with indefinite contracts, while providing little security to workers in non-standard contracts, increasing the level of income inequality (OECD, 2011). Temporary workers are worse off in many aspects of job quality. They tend to receive less training and, in addition, have more job strain and have less job security than workers in standard jobs. Earnings levels are also lower in terms of annual and hourly wages. Evidence shows that temporary workers in OECD countries face a significant wage penalty, even after controlling for observable individual, family and work characteristics (OECD, 2015a).

Legislation should focus on protecting workers rather than jobs. To rebalance job protection, Italy and Spain have introduced a single standard contract applying only to new employment contracts, with employment protection increasing with tenure. This new contract provides a basic level of protection for the first two years, after which the level of compensation for unfair dismissal increases. As evidence becomes available about the benefits, and possible costs of the single contract in Italy and Spain, Chile could usefully draw lessons.
Raising female participation is essential

Gender gaps contribute significantly to income inequality in Chile (OECD, 2012), even though many women have joined the labour market, as female participation increased from below 40% in the early 2000s to 55.7% in 2014. Gender gaps in employment and earnings persist: women are still less likely to be in paid work, to progress in their career and are more likely to earn less in their job (women earn 16% less than men). Considerable differences remain in the type and quality of jobs held by women and in their working hours, which can be partly attributed to social stereotypes about gender roles. Reducing the labour force participation gap between men and women by 50% has been estimated to raise annual growth in GDP per capita by 0.3 percentage points on average (OECD, 2012b). But it can also contribute to reduce income inequality, as evidence from OECD countries shows that having more women in paid (full-time) work results in lower household income inequality (Harkness, 2010; OECD, 2015).

Raising female participation is a top priority for the government. Its initial emphasis has been on rapidly expanding the availability of public childcare institutions through the “National Care Programme”. To reinforce this effort, additional spending on active labour-market policies to boost participation is needed. Evidence shows that active labour market policies are potentially very important to bring women into employment as the average effects of these programmes are larger for women than for men (Bergemann and Van den Berg, 2008). This is because women’s labour supply is more elastic than men’s, and therefore participation in a programme that increases labour market opportunities, like a successful skill-enhancing training programme, may subsequently lead to job offers that are acceptable. Not surprisingly, Chile is one of OECD countries with the highest gender gap in labour force participation and with the lowest level of public spending devoted to active labour-market policies (Figure 14). The government has put in place a new programme, MasCapaz that will expand spending in labour-market programmes by 0.4% of GDP and contribute to increase women’s labour participation and reduce the gender gap. The first-ever ministry on women is being created, which is in charge of promoting women rights.
Boosting productivity and investment

Boosting productivity growth is perhaps Chile’s foremost challenge to raise living standards. Unfortunately, Chile’s productivity growth has trended at below zero for much of the past two decades (OECD, 2013a, 2015c), although outside of the capital-intensive mining sector, total factor productivity growth has been positive (Figure 15). Chile has improved its policy settings in recent years, but the intensity of competition in some sectors is weak and overall spending on R&D – particularly by the business sector – remains very low (Figure 16). Regulatory reforms and further administrative simplification will help open up pathways for entrepreneurship and investment, including through boosting infrastructure. Chile also needs to act on a number of fronts to improve the economy’s innovation potential. Among the wide-ranging structural reforms that have been proposed by the administration, the Agenda for Productivity, Innovation and Growth seeks to address longstanding weaknesses in these areas.
An important component of the Agenda is institutional strengthening. Excessive fragmentation of the innovation system has been a longstanding problem that was discussed in previous Economic Surveys of Chile (OECD, 2013a) and earlier reviews of innovation policy (OECD, 2007). While the government has considered institutional reorganisation (Rivas et al., 2015), consensus for a new Ministry has not been achieved as of yet. At a minimum, the strengthening of the Inter-ministerial Committee on Innovation, with an explicit legal framework, and the National Council of Innovation for Development (CNID), which helps set longer-term strategy, seems warranted.

The Productivity Agenda also helps to address the fragmented institutional set-up for innovation by giving priority to a coherent set of targeted policies. It includes 47 different measures, focused around promoting the diversification of production, boosting sectors with high growth potential, the expansion of programmes and resources available for early-stage start-ups, boosting the competitiveness of businesses and generating a new impetus to exporting and attracting investments by reshaping the Foreign Investment Committee. The Agenda includes new funding of over USD 1.5 Billion, focusing on public-private co-operation. Over half of the measures have been implemented so far. Among the most notable of these endeavours is the creation of a Productivity Commission that will help to ensure that productivity is the focus of policymaking across the government.

As part of the Productivity Agenda, the administration announced the creation of a Productivity Commission in July 2015. Initially, the Commission has been set up by decree, and is a standing advisory body. This group of experts will carry out analyses and make recommendations relating to the design, implementation and evaluation of policies and reforms to directly stimulate productivity in Chile. The Commission may also prepare studies and regular reports, publish data and information and make proposals in areas they identify as priorities. This new body has considerable potential to strengthen the policymaking process, and help to identify the best way forward in a range of areas. Based on the pioneering experience of Australia, such bodies can help to address weaknesses in the policymaking process, by helping to develop consensus over contentious issues, based...
Note: Panel B: The tax subsidy rate is calculated as 1 minus the “B-index”, a measure of the before-tax income needed to break even on USD 1 of R&D outlays. It is based on responses from national authorities and R&D statistical agencies to the OECD questionnaire on R&D tax incentives and also draws on other publicly available information. Benchmark tax data information, including statutory corporate income tax rates, is obtained from the OECD Tax Database, basic (non-targeted) corporate income tax rates. Source: OECD (2015e), OECD Science, Technology and Industry Scoreboard 2015: Innovation for growth and society.
on their role as independent authorities. In this regard, it may be useful to give it a more formal and statutory role, including by introducing a requirement that government respond publicly and promptly to its recommendations (see Banks, 2015).

**Strengthening the competition framework is crucial**

Persistent lack of strength in Chile’s productivity record can be partly traced to weaknesses in the competitive environment in product markets, where high market concentration is commonplace (Solimano, 2012). While Chile has made important improvements to its competition policy framework, some crucial features in the 2009 law are still missing (OECD, 2014a). The current system for reviewing mergers lacks clear merger control jurisdictional and substantive criteria, and relies instead on general antitrust procedures which were not designed for merger control purposes. Chile also lacks both an appropriate legal framework to carry out market studies and adequate resources to effectively perform them (OECD, 2015b). Market studies can lead to recommendations to private firms or public bodies aimed at removing any unnecessary obstacles to the working of markets, and if anticompetitive behaviours are detected they can lead to the opening of antitrust investigations.

The government is committed to reforming the competition law framework to ensure effective competition enforcement. A draft competition bill is currently in Congress, covering a new set of sanctions for cartels, a reformed system for merger control and market studies. The proposed reform is in line with OECD best practices and previous recommendations to Chile. The core of the reform increases the effectiveness of sanctions against illegal cartels: it promotes the introduction of criminal sanctions for executives and a higher ceiling for monetary fines. The OECD advocates a strong and effective system of sanctions to stamp out hard-core cartel behaviour, which is considered the most egregious violation of competition. The bill addresses these concerns by introducing a more effective and transparent merger control regime and granting the Fiscalía Nacional Económica formal powers to perform market studies.

**Improving the regulatory environment will facilitate more dynamism**

Another important barrier to productivity growth is the adverse impact of overly strict product market regulations. The OECD has recommended in previous *Economic Surveys* and in *Going for Growth* that administrative burdens on start-ups be further reduced, registration and notification requirements be eased and the bankruptcy regime be simplified. Major reforms in each of these areas have been undertaken, notably a law in 2013 that allows businesses to be started in only a day, and a bankruptcy law in 2014 that makes exit much easier. The new law is an important step in improving business dynamism. Better exit policies should improve reallocation of resources towards more productive uses, and by reducing uncertainty, stimulate both start-ups and venture financing.

Nevertheless, product market restrictiveness for Chile remains above the OECD member average, based on a standardised measure of stringency (Figure 17, Panel A). In some sectors, the state's involvement in business operations can be further aligned with best practice. For instance, regulatory procedures in some sectors are complex, which includes licensing requirements, and competition in some network sectors such as gas is hampered by still high entry barriers. Simulations based on countries with similar levels of
Figure 17. **Business regulation remains restrictive in multiple areas**

**A. Product market restrictiveness, 2013**

- **State Control**
- **Barriers to entrepreneurship**
- **Barriers to trade and investment**

**B. Services trade restrictiveness index (STRI)**

**C. Change in GVC participation index**

*Note:* The PMR indices take on a value of 0 to 6, from least to most stringent. More information is available at [www.oecd.org/eco/pmr](http://www.oecd.org/eco/pmr). The STRI indices take the value from 0 to 1, where 0 is completely open and 1 is completely closed. They are calculated on the basis of information in the STRI Database which reports regulation currently in force. For further information, see [www.oecd.org/tad/services-trade/services-trade-restrictiveness-index.htm](http://www.oecd.org/tad/services-trade/services-trade-restrictiveness-index.htm).

*Source:* OECD, Product Market Regulation Database, STRI Database, Trade in Value Added (TIVA) Database.

StatLink: [http://dx.doi.org/10.1787/888933302333](http://dx.doi.org/10.1787/888933302333)
restrictiveness (i.e. France and Mexico) suggest that aligning product market regulation with OECD best practice could boost GDP by ¼ to ½ per cent annually within five years (OECD, 2015c; IMF, 2015).

Further reforms of restrictions on trade in services (Figure 17, Panel B) could help to further improve Chile's integration into global value chains (OECD, 2015c, d, e). Open and coherent trade and investment policies can also be an important element of the pro-productivity reform agenda, and can facilitate local firms' participation in global value chains, which retrenched over the 2008 to 2011 period (Panel C). Exports and investment remain highly concentrated, and intermediary services such as maritime transport, telecommunications and courier services are some distance from best practice. Recognizing the need to facilitate further upgrading of value chains, as part of the Productivity Agenda, the Government passed a Foreign Investment Law in 2015, which introduced a new framework for investment promotion in Chile. This reform provides for a more pro-active investment strategy, and the government has moved towards establishing a reshaped investment promotion agency to ease the entry of foreign investors. It will be important that the approach continue to follow the OECD Policy Framework for Investment (OECD, 2015d).

The governance of state-owned enterprises (SOEs) could also be improved. In general, Chilean SOEs do well in matters relating to equal treatment of shareholders or stakeholders' engagement. However, there is a need to continue strengthening the governance of SOEs, including as part of Chile's commitments to OECD instruments in this area. For instance, appointments to the boards of SOEs should be merit-based and politicisation avoided; the boards should consist primarily of independent directors, ideally with private-sector experience skills. This specifically remains an issue with two key SOEs, the state mining company (ENAMI) and the state oil company (ENAP), whose corporate governance body have not yet been reformed.

Chile's national regulations provide the general framework for administrative procedures and an efficient state administration, but the lack of a comprehensive regulatory reform programme has reduced the possibilities to achieve even better economic outcomes (OECD, 2015f). Strong regulatory governance is needed to move forward and, according to OECD best practice, this will normally require a regulatory oversight body to give guidance to policymakers about regulatory issues that need to be fixed. Such a body would make systematic use of evidence-based regulatory impact assessments (RIA) to promote effective regulation to improve the effectiveness and efficiency of new and existing regulation. While Congress carries out ex post reviews of laws, fewer efforts have been made to introduce ex ante impact assessments (e.g. Estatuto PyME), and these have had limited success. Most importantly, there is no legal requirement for the benefits of new regulations to outweigh their costs, nor for the regulation to be underpinned by an explanation for its rationale. One successful comprehensive regulatory reform approach that has been used in the Netherlands is to review existing regulations with an objective of reducing redundant regulatory burdens in a targeted way, at the same time improving the overall quality of public policy objectives. A distinctive feature of the Dutch regulatory reform architecture are quantitative targets such as the net 25% reduction target for regulatory burdens imposed on businesses and aimed at improving regulatory efficiency inside government, complemented by a dashboard of qualitative indicators. Introducing “zero licensing procedures”, as was done in Portugal, could also help. This is a simplified regime that allows for starting or modifying certain economic activities with a simple declaration through a single electronic point of contact.
Successful innovation promotion programmes could develop new fields

Competition and innovation are closely interlinked, and Chile’s low total factor productivity growth is also linked to weaknesses in its innovation system. In addition to raising productivity growth, innovation is critical for diversifying the economy away from mining. Chile has improved its policy settings in recent years, but R&D and innovation spending – particularly by the business sector – remain very low, despite an eased and expanded R&D subsidy scheme (Figure 16, Panel B) that has been gaining traction among companies. Nevertheless, Chile remains the lowest overall R&D performer in the OECD, at under ½ per cent of GDP (OECD, 2015e).

Previous Economic Surveys have recommended that Chile could strengthen its innovation programmes by thoroughly evaluating them (OECD, 2013). These programmes are often well-designed, but they struggle to address a long-standing divide between businesses and universities in the innovation system, although National Innovation Policy (2014-18) includes programmes that specifically target this problem. Often, programme scale and take-up have not been large enough to make a substantial impact, with only 1% of companies in the formal sector taking part. The government is currently carrying out pilot evaluations of 1 in 10 of the programmes, and plans to begin a comprehensive implementation in 2016.

More broadly, a new effort is being devoted to Strategic Programmes (Programas Estratégicos), which foster public-private co-ordination in potentially high growth sectors, and could help to foster the emergence of clusters. While the OECD has previously urged caution on certain cluster-based approaches (OECD, 2013), greater concentration of public support (including provision of infrastructure) can be appropriate if it is done in a way that emphasises industry-science co-operation and seeks to promote on-going dialogue among government, private firms and other stakeholders (see Dougherty, 2015; Wagner, 2015). OECD reviews suggest that addressing co-ordination problems and focusing on creating networks, such as a framework for dialogue among government, private firms and other stakeholders, is the most effective approach (Warwick, 2013). This is the approach that the new Programme follows, which will require follow-through to be successful, conditional on it being positively evaluated. Chile’s copper deposits for mining, waters for fish farming, soils for wine making, clear skies for astronomy and high radiation for solar power are important assets for developing science and cross-links that can help generate a local innovation eco-system and strengthen technological development. Efforts should seek to build on comparative advantage, with caution exercised to avoid creating opportunities for rent-seeking behaviour, through continued monitoring and regular evaluations of different support programmes as well as a strong involvement of the private sector (OECD, 2015h).

Environmental challenges are being addressed

Chile adopted a Green Growth Strategy in 2013, which is now being updated and broadened to reflect the new administration’s concerns on ecosystems, health and gender. The country continues to face high levels of air pollution, particularly in areas with high population density and surrounding mining areas, with the poor most heavily exposed (OECD, 2015g). Heavy reliance on (imported) fossil fuels has made control of emissions difficult (Figure 18). However, the renewable target of 20% by 2020 should be met, and the new administration’s agenda on energy aims to improve incentives further, to achieve its latest commitment to reduce CO₂ emissions per unit of GDP by 30% relative to 2007 levels.
Important progress has occurred in the area of green taxes, although the level of these taxes is below the OECD average. Chile introduced a tax on new vehicles to raise revenues as well as to orient consumers towards less polluting vehicles. The tax entered into force in December 2014. It is paid only once, before the vehicle is registered, based on the vehicle’s emissions of nitrogen oxides (NO\textsubscript{x}) and its selling price. Nevertheless, due to exemptions, implied tax rates on transport fuels are among the lowest in the OECD, and Chile could advance on removing exemptions on fuels to align with the social costs of environmental damages. Such taxes on fuels have the additional advantage of being generally progressive with respect to incomes (Flues and Thomas, 2015).

Chile also introduced an innovative tax on emissions from stationary sources of pollution, from 2017, which will significantly broaden the energy tax base and might set an example for other countries. The tax includes two components: a carbon tax at a rate of USD 5 per ton of CO\textsubscript{2} and a tax on local pollutants (SO\textsubscript{2}, NO\textsubscript{x}, PM) which takes into account the social cost of pollution, the dispersion of pollutants and the size of the population exposed. However, the proposed carbon tax still falls well short of the actual social costs of carbon (OECD, 2015g) and should be raised to cover these social costs, as well as to help spur long-term investment in low-carbon technologies.

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Thematic chapters
Chapter 1

Bringing all Chileans on board

The Chilean economy has had an extraordinary performance over the last decades with strong growth and declining poverty rates. However, the economy is now slowing at a time when inequality remains very high, making future social progress challenging. This chapter discusses how to achieve greater social inclusiveness against the background of weaker medium-term growth. First, it argues that Chile needs to increase income redistribution through its tax and transfer system towards levels prevailing in other OECD countries. Although existing social transfers are effective in combatting poverty, their size remains small and many households at the bottom of the ladder are not reached by them. Second, the chapter argues that labour earnings should be less disparate, as they explain around 70% of income inequality. This should be done by updating labour legislation, but also by empowering low-skill workers and enabling them to increase their productivity, through the acquisition of adequate skills. Finally, focus should be placed on closing wide gender gaps.
Chapter 2

Better skills for inclusive growth

Improving education and skills is the linchpin to reduce income inequality and boost productivity growth. This chapter argues that to improve, and make better use of, the skills of the labour force, Chile could gain a lot from a comprehensive and consistent Skills Strategy along three pillars: developing, activating and using skills effectively. Chile has made tremendous progress over the last decades attracting more students to the education system. Yet, educational outcomes remain below OECD standards, and are strongly linked to students’ socio-economic status. Improving the quality and equity of education would help achieve stronger productivity growth and make Chile a more inclusive country. Therefore, Chile should set the goal of attaining universal skills by 2030. Reaching this goal requires investing more in early childhood education, making schools more inclusive and reshaping teacher careers. Chile also needs to improve access to quality tertiary education for students from medium and low socio-economic backgrounds. Finally, in terms of activating and using skills effectively, a key goal should be to reduce skill mismatch, which contributes to low productivity growth. This requires more flexible labour markets, investing more in vocational education and training, and promoting the participation of more women in the fields of engineering and computer science.
This Overview is extracted from the 2015 Economic survey of Chile.

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