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IMF Working Paper

Understanding Chile's Social Unrest in an International Perspective

by Metodij Hadzi-Vaskov and Luca Antonio Ricci

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I N T E R N A T I O N A L M O N E T A R Y F U N D

IMF Working Paper

Western Hemisphere Department

Understanding Chile's Social Unrest in an International Perspective

Prepared by Metodij Hadzi-Vaskov and Luca Antonio Ricci

Authorized by Luca Ricci

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Abstract

We aim to provide a broad descriptive overview of Chile's social issues, in comparison to other countries and over time, in order to place the recent social unrest in historical and international perspectives which can help prepare the ground for future policy priorities. We follow an eclectic approach, classifying a broad set of indicators along six dimensions—inequality across: i) income; ii) perception; iii) access; iv) opportunity; v) redistribution; and vi) location. The analysis puts forward a set of descriptive findings. First, income inequality declined substantially but remains high, also compared to countries with similar level and path of development. Second, Chile seems to be one of the few countries in Latin America with declining inequality where perceived inequality actually increased. Third, notwithstanding an increase in social spending, access to essential services appears limited, particularly for middle and lower income classes, amid fast growth of out-of-pocket health expenses, relatively faster growth of cost of living for the relatively poorer, and remaining weaknesses in the pension and education systems. Fourth, inequality of opportunity is high, with limited competition. Fifth, fiscal redistribution has improved markedly, but remains low by international standards. Finally, inter-regional inequality has declined substantially over the last two decades, reaching levels similar to the OECD median.

JEL Classification Numbers: D63; F50; O11; O47; O57

Keywords: Chile; Institutions; Inequality; Social indicators; Social unrest

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“It is true that problems accumulated for many decades and that different governments were not able to recognize this situation in all its magnitude.”
President Sebastián Piñera [October 22, 2019]

I. INTRODUCTION¹

In late 2019, Chile—frequently considered the most prosperous economy in Latin America by various criteria—experienced the largest social unrest in several decades. While the country saw several waves of social tensions over the previous decades—including the large student protests of 2011-13—the outburst of social discontent starting on October 18, 2019 was both unprecedented in magnitude (at least since Chile’s return to democracy in 1990) and widely unexpected by analysts, commentators, and even the top authorities in the country.² Given that the scale, scope, and complexity of this social unrest came as a major surprise, this paper aims to place Chile’s social developments in both an historical and an international perspective, in an attempt to understand the underlying discontent leading to the social outburst.

By providing a broad descriptive overview of Chile’s social issues, how they compare to other countries and their evolution over time, the paper helps prepare the ground for the discussion on policy priorities. In particular, the paper aims to identify the social areas in which Chile made substantial progress, and point at those areas in which more progress is desirable. The paper does not analyze the economic and social consequences of the unrest: a companion paper (Hadzi-Vaskov, Pienknagura, and Ricci, 2021) provides a formal investigation of the macroeconomic effects of social unrest using econometric analysis.

Inequality will constitute the common underlying thread that links the diverse set of social issues investigated following an eclectic approach. We distinguish at least six different manifestations of inequality that help place Chile’s experience in an international context: (i) income inequality—the most commonly analyzed type of inequality; (ii) perceived inequality—a concept based on public perceptions linked to fairness; (iii) inequality of access—broadly understood as unequal access to affordable essential goods and services; (iv) inequality of opportunity—the degree of income inequality that can be accounted for by

¹ We would like to thank Ivan Burgara for providing excellent research assistance. We benefitted from useful comments and suggestions from Alejandro Werner, Patricia Alonso-Gamo, Krishna Srinivasan, Jorge Roldos, Elías Albagli, Andrés Pérez, Valerie Cerra, David Coady, David Amaglobeli, Mehdi Raissi, Jaime Guajardo, Yan Carrière-Swallow, participants in presentations at IMF WHD seminar, the IMF Inequality Advisory Group, and the World Bank. The views expressed in this paper are those of the authors and do not necessarily represent the views of the IMF, its Executive Board, or IMF Management. All errors are our own.

² “What is happening is a disconnect between the political elite and the citizens and we are all responsible.”
 Former President Ricardo Lagos (October 22, 2019)

characteristics at birth; (v) inequality of redistribution—touching upon the redistributive capacity of fiscal policy; and (vi) cross-regional inequality—reflecting disparities across regions within the country.

The rest of the paper is organized as follows. Section II describes data sources and the criteria for cross-country comparisons through panel charts. Section III takes stock of Chile’s remarkable economic success, in order to ground the social analysis in its economic context. Section IV places Chile’s social performance into an international perspective, by comparing its indicators along the six dimensions of inequality. On the basis of this descriptive analysis, Section V identifies possible policy changes that are needed at the current juncture. Finally, Section VI provides some concluding remarks.

II. DATA AND CRITERIA FOR COMPARISONS

The descriptive analysis is based on a multitude of indicators from more than a dozen sources (see Annex I). The comparison of Chile’s performance in various areas with comparator countries is mainly done through four types of panel charts. These are defined according to the following four criteria for comparisons:

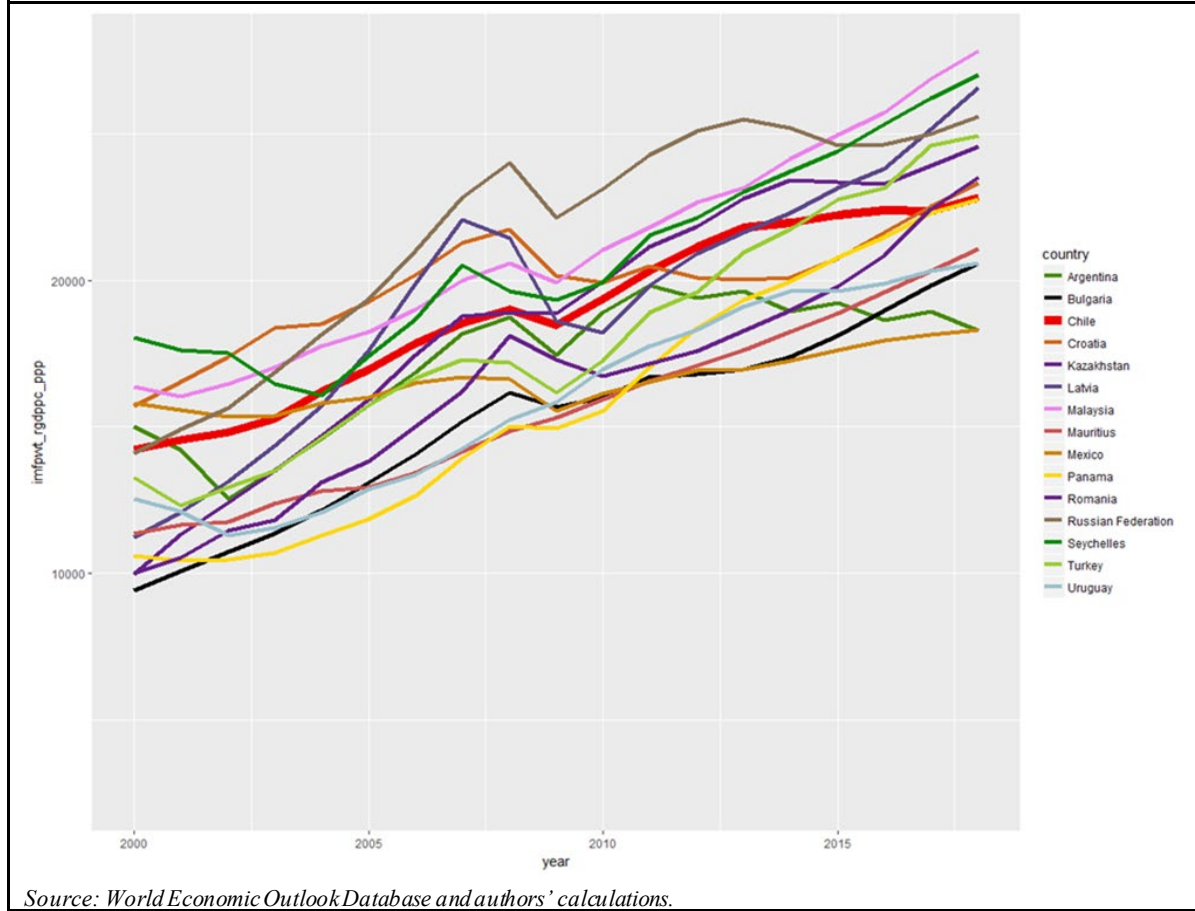
- *Overtime and relative to other groups*: comparing the indicator for Chile versus the average indicators for the three country groups OECD, LA5³, and EM;
- *Cross section*: comparing with average indicator values over the period 2015–2018, across countries;
- *Change*: comparing the change in the indicator for Chile over the period 2000–2018 versus the change in the indicator for other countries over the same period;
- *Similar development path*: comparing the indicator for Chile with the average for a group of countries with similar development path, as measured by similar initial (2000) Real PPP GDP per capita and similar final (2018) Real PPP GDP per capita, where the similarity is defined as $-/+5000$ Real PPP GDP per capita.⁴

The first three panel charts are largely standard. The fourth relies on identifying a set of countries that most closely followed the evolution of Chile’s development path over the past two decades. While the selection criterion is more restrictive compared to the other three, it identifies a group of 15 countries (Figure 1) that serve as the most relevant comparator for Chile’s development path over the past two decades. Arguably, this is the comparison that is potentially the most interesting.

³ LA5 includes the set of the remaining largest economies in Latin America (excluding Chile): Argentina, Brazil, Colombia, Mexico, and Peru.

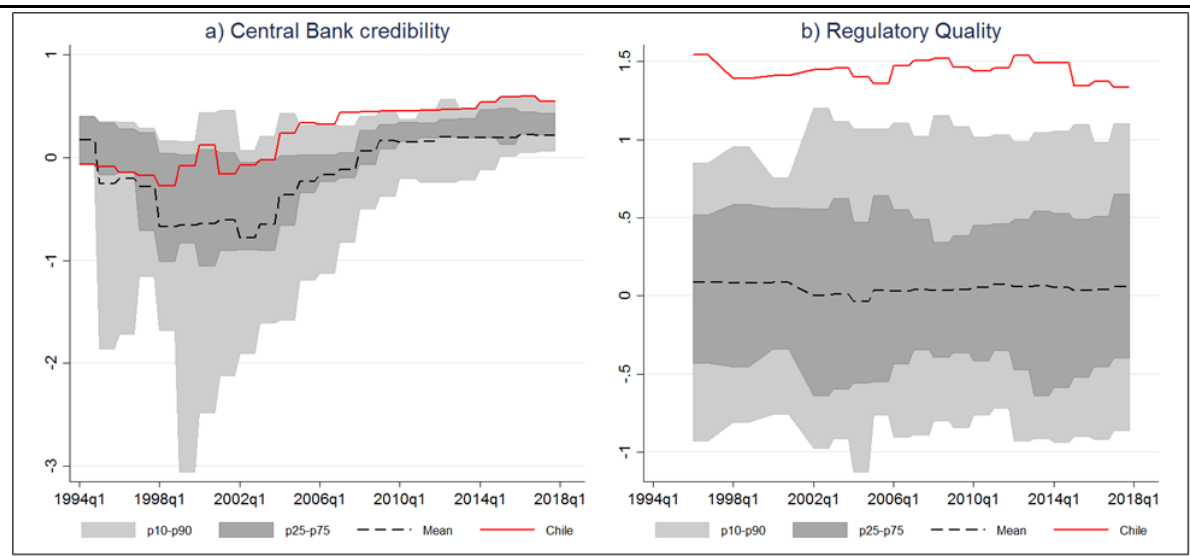
⁴ We also did two other comparisons—similar growth or development level—but mainly focus our discussion in this paper on the comparison of countries with similar development paths.

Figure 1. Countries with Similar Development Path as Chile



III. CHILE'S STRONG MACROECONOMIC PERFORMANCE

Over the past decades, Chile experienced strong economic growth supported by very strong macroeconomic policy frameworks and some of the strongest institutions among emerging market economies (EMEs). For instance, the average annual growth rate of Chile's GDP over the period 1990–2018 was 4.7 percent, considerably above the average annual GDP growth rate of 2.8 percent for the LAC region over the same time period. In addition, Chile's record on macroeconomic policy credibility and institutional quality has been one of the strongest among EMEs over the past several decades (Figure 2). This remarkable economic performance coincided with a significant reduction in poverty and improvement of living conditions for large segments of the population.

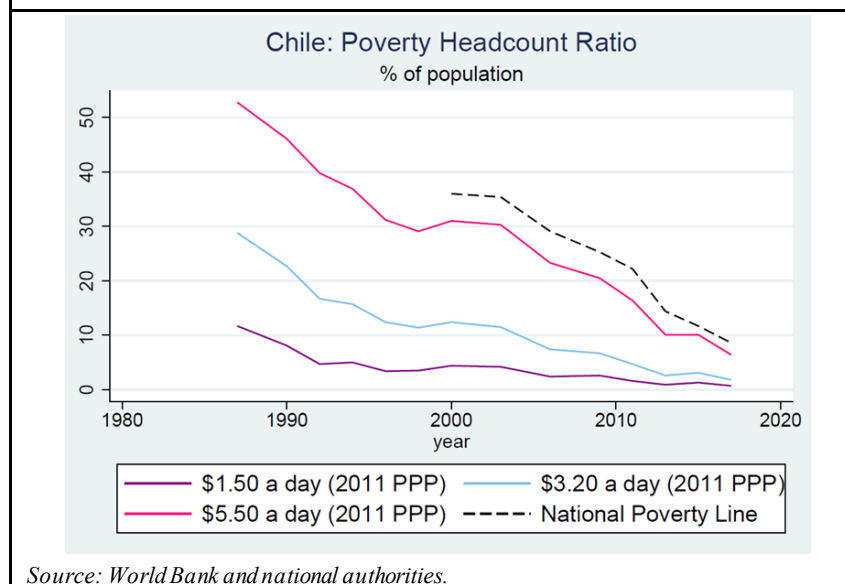
Figure 2. Chile and EMEs: Central Bank Credibility and Regulatory Quality

Source: World Bank's World Governance Indicators, Albagli et al. (2020), and Bems et al. (2018).

Note: Dark gray columns denote the 25th and 75th percentiles, light gray columns denote the 10th and 90th percentiles, and red solid line denotes Chile.

A. Poverty

Figure 3 shows the three definitions of the poverty line employed by the World Bank in addition to the national poverty line. While these definitions and measurements differ from each of other, the common message from all of them is that the poverty rate in Chile declined significantly over the past three decades. For example, extreme poverty—as captured by the line depicting US\$1.5 (2011 PPP)—has been virtually eliminated, while all other measures imply that the poverty rate has declined into single digits.

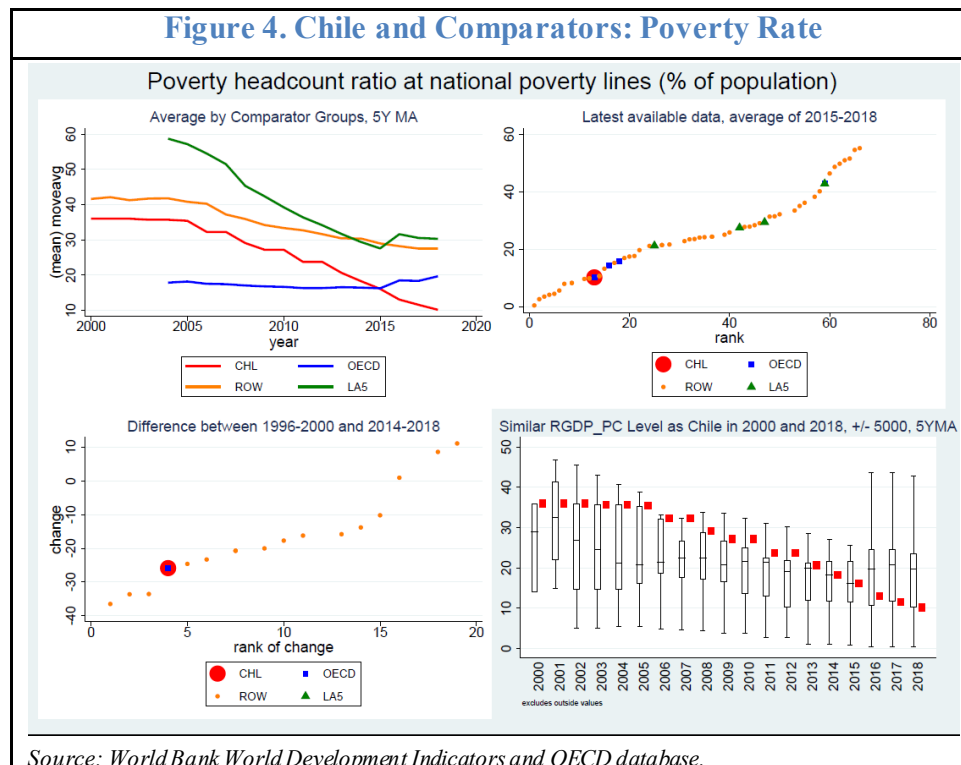
Figure 3. Chile: Poverty Rate

Source: World Bank and national authorities.

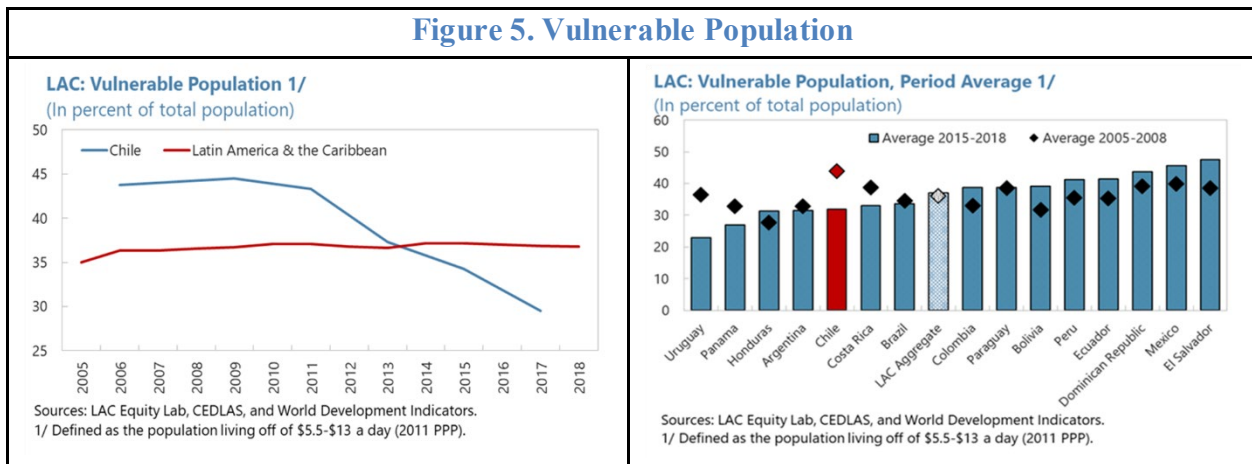
In addition, Figure 4 provides the first panel-chart comparing Chile with other country groups, according to the four criteria described in Section II:

- *Top-left*: Comparison over time and relative to other groups (OECD, LA5, and EM);
- *Top-right*: Cross sectional comparison of average values for the indicator over the period 2015 – 2018;
- *Bottom-left*: Difference in the indicator over the period 2000 – 2018;
- *Bottom-right*: Comparison with countries that have similar development path.

The top-left panel chart shows that the poverty rate in Chile declined faster than in OECD economies or the rest of the world, and even faster than in the LA5 group. The top-right chart implies that the average poverty rate in Chile over the period 2015–2018 is relatively low compared to the broad set of economies, placing Chile among the 15 economies with the lowest poverty rate in our sample. In addition, the bottom-left chart shows the change in the poverty rate over the past (roughly) two decades, suggesting that Chile reduced the poverty rate by about 25 percentage points over this period—one of the most significant improvements in our sample. Finally, the bottom-right panel chart shows the evolution of the poverty rate in Chile relative to the set of economies with a similar development path: while Chile started with one of the highest poverty rates among the economies in this set in 2000, it managed to reduce it substantially, achieving one of the lowest poverty rates among these economies in the most recent period.



While the poverty rate is one of the most widely monitored indicators, additional complementary indicators help gather a broader picture of the economic well-being of the population. Figure 5 looks at the evolution of the vulnerable population, i.e. the segment of the population that is not poor, but faces a considerable probability of falling back into poverty.⁵ The left chart shows that the vulnerable population represented a larger share of the total population in Chile than in the LAC region in 2005. However, while the share of vulnerable population declined significantly in Chile over the next decade or so, it remains roughly unchanged in LAC as a whole. Similarly, the right chart in Figure 5 shows that Chile had the largest share of vulnerable population among the sample of LAC economies in 2005-2008, but achieved one of the largest reductions over the next decade, reaching one of the lowest shares of vulnerable population among the LAC economies in 2015-2018.



Overall, the evidence in this Section indicates that the economic dynamism shown by the Chilean economy in the last decades has supported the significant reductions in poverty and the share of population classified as vulnerable. Having taken stock of these stylized facts, our descriptive analysis moves towards trying to investigate which factors may have contributed to the social discontent that erupted in October 2019, despite these important improvements in living conditions. As hinted in the introduction, the analysis is structured along the 6 dimensions of inequality, starting with the most commonly monitored one— income inequality.

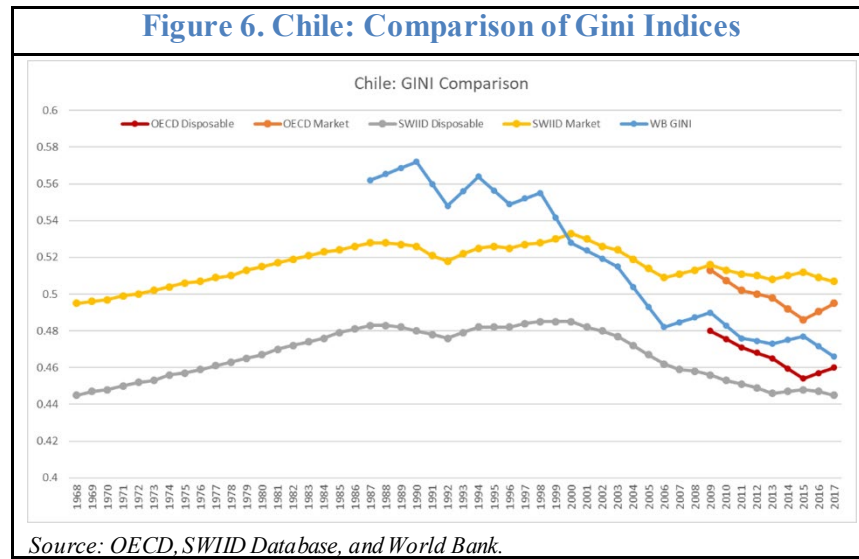
IV. DIMENSIONS OF INEQUALITY

This section is the core of our eclectic approach aimed at understanding the social discontent in Chile. It is grounded in six different manifestations of inequality that help place Chile's experience in an international context: (i) income inequality; (ii) perceived inequality; (iii) inequality of access; (iv) inequality of opportunity; (v) inequality of redistribution; and (vi) cross-regional inequality.

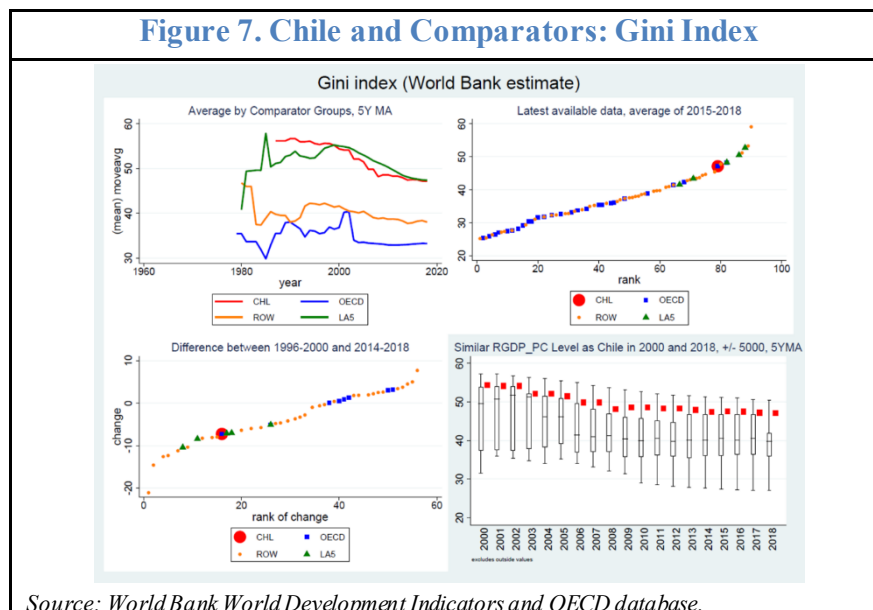
⁵ The vulnerable population is defined as the population living off US\$5.5-13 per day (2011 PPP).

A. Income Inequality

There are alternative definitions and measurements of the most commonly used indicator of income inequality—the Gini index. For instance, Figure 6 compares the evolution of 5 alternative measures of Gini for Chile, based on alternative sources (OECD, SWIID, World Bank) and definitions (market income vs. disposable income). While there are differences among them, they mainly point to a significant reduction in income inequality in Chile over the past two decades.



The comparison with other country groups in Figure 7 also suggests that, although Chile's Gini index declined over time (top-left and bottom-left panel charts), Chile's income inequality remains one of the highest on the global scale (top-right panel chart) and consistently at the top of the distribution of countries with similar development path over the past two decades (bottom-right panel chart).



While the Gini index has been commonly used as a key indicator of income inequality, complementing it with additional indicators can provide a more comprehensive picture about the challenges and evolution of income distribution. Accordingly, Figure 8 depicts the income shares held by the top 10 percent (upper panel) and the bottom 10 percent of the population (lower panel).

The upper panel of Figure 8 shows that, notwithstanding a decline in the income share of the top income decile over the past three decades (top-left and bottom-left panel charts), it still remains one of the highest among comparator groups (top-left) and in the global sample of countries included in our analysis (top-right). Moreover, the income share accruing to the richest income decile in Chile has been consistently at the top among the group of countries with similar development paths over the past two decades (bottom-right).

The lower panel of Figure 8 depicts the income share pertaining to the bottom decile of the income distribution. Opposite to the findings for the richest decile, the income share of the bottom decile in Chile is one of the lowest in international comparisons. Despite an improvement over the last two decades (top-left and bottom-left), the income share of the poorest segment of the population in Chile remains lower than in various comparator groups (AEs and rest of the world), albeit somewhat higher than in Latin America (top-left). Similarly, it remains one of the lowest in the global sample of countries (top-right), and only a few countries, largely from Latin America, have lower income share accruing to the bottom decile of the distribution. Compared to the set of countries with similar development path, the income share held by the bottom decile in Chile was among the lowest in the 2000s and has even deteriorated in relative terms since then (bottom-right).

Figure 8. Chile and Comparators: Income Shares Held by Top and Bottom Deciles

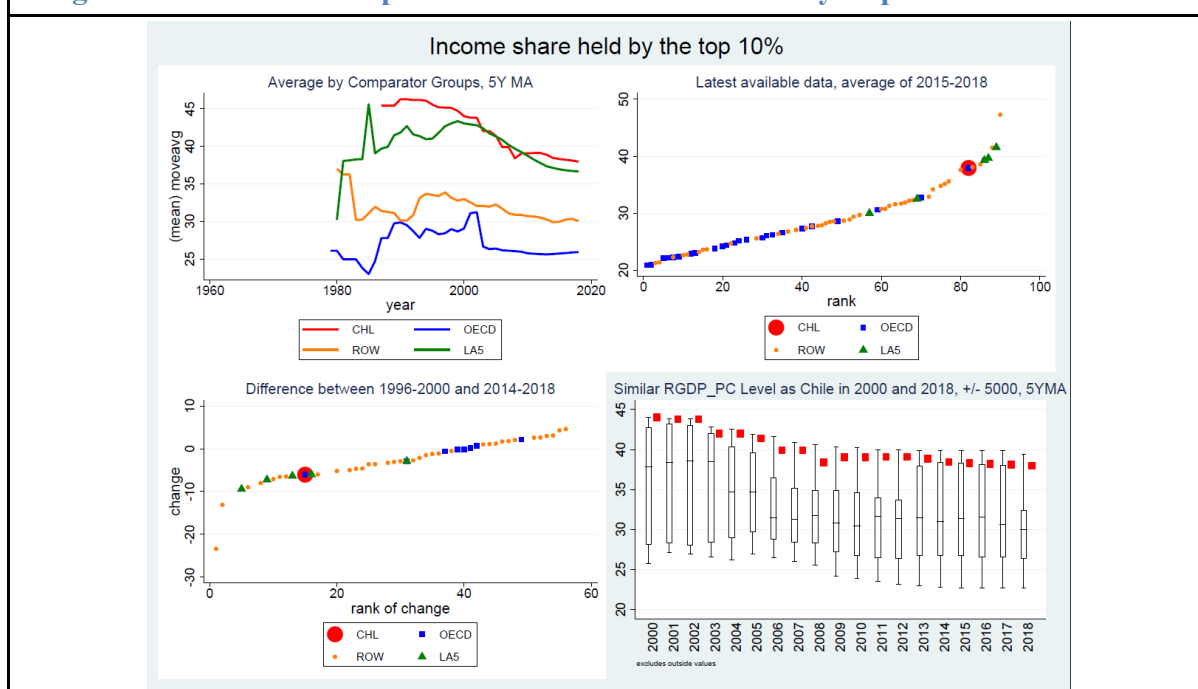
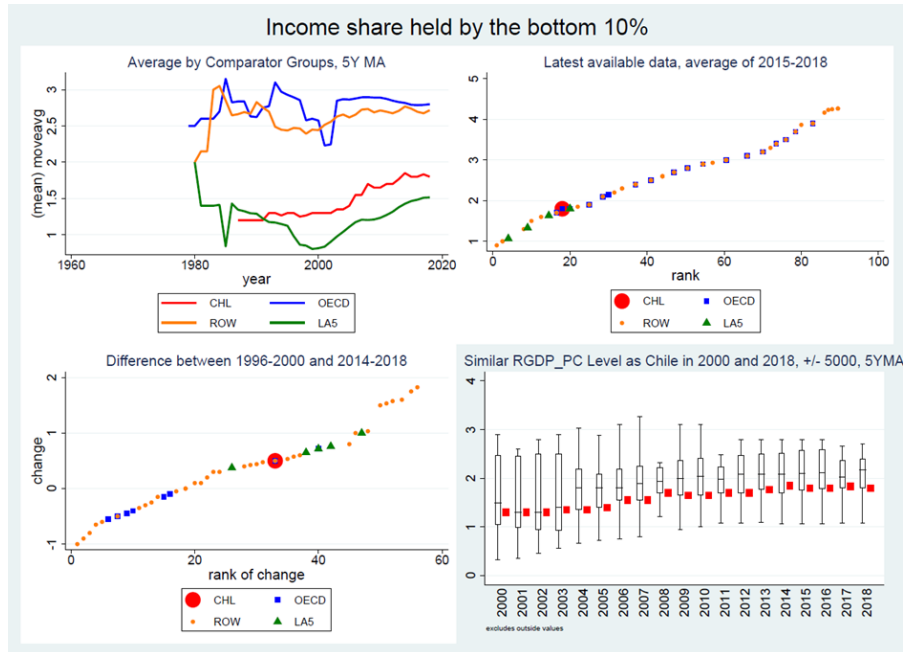


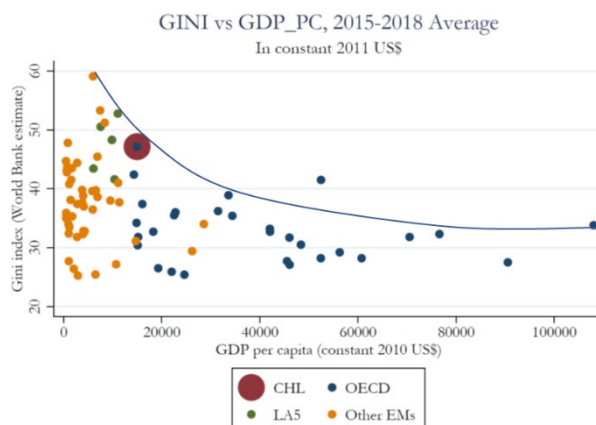
Figure 8. Chile and Comparators: Income Shares Held by Top and Bottom Deciles (Concluded)



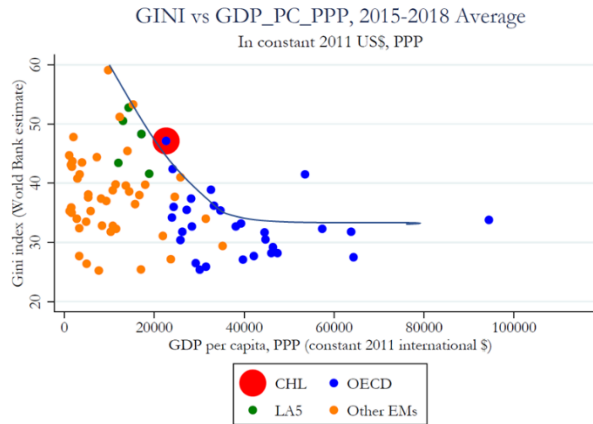
Source: World Bank World Development Indicators and OECD database.

It is informative to relate income inequality to the level of development. Figure 9 compares the level of income inequality—measured by the Gini index—against the level of income per capita (in constant US\$ in the top panel and in PPP-adjusted US\$ in the bottom panel). The evidence in this chart implies that there is no country with Chile’s level of development (income per capita) or higher that has a similar or higher income inequality as measured by the Gini index. Hence, Chile seems to be located on the “inequality frontier” in relation to its level of development. This is consistent with the findings in Figure 8, which were suggesting that Chile has had one of the highest income shares accruing to the top decile and one of the lowest income shares accruing to the bottom decile among the set of countries with a similar development path.

Figure 9. Chile and Comparators: Income Inequality and Level of Development



**Figure 9. Chile and Comparators: Income Inequality and Level of Development
(Concluded)**

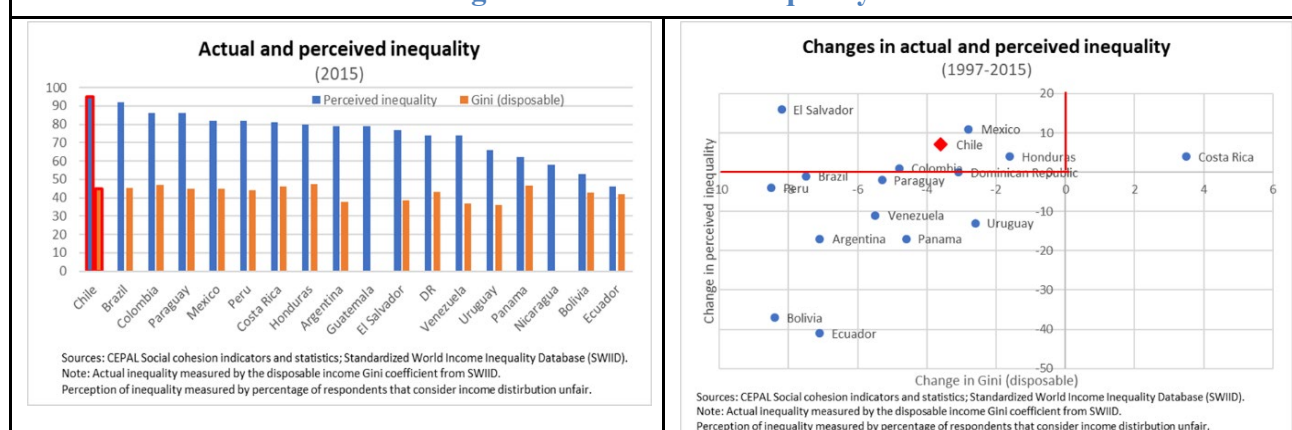


Source: World Bank World Development Indicators and authors' calculations.

B. Perceived Inequality

While income inequality is the most commonly monitored and discussed dimension of inequality, several alternative dimensions may provide important complementary insights. For instance, in the stride to gain a better understanding of the underlying reasons behind social discontent, the perception of inequality (or the perception of the fairness in income distribution) may play an important role.

Figure 10 shows some evidence about perceived inequality in Latin America. The left panel chart shows a comparison between actual and perceived levels of inequality, suggesting that Chile has the largest gap between perceived (also the highest in the sample) and actual inequality in the group of Latin American countries. In addition, the right panel chart describes the relationship between changes in actual inequality and changes in perceived inequality. Chile belongs to the group of countries (together with El Salvador, Honduras, and Mexico), located in the top-left quadrant, which seem to show an anomalous behavior: perceived inequality in these countries increased over the period 1997–2015, even though the actual inequality—as measured by the Gini index—declined over the same period. While understanding the underlying reasons behind the large actual-perceived inequality gap and the opposite movements in actual vs. perceived inequality deserves dedicated research, these phenomena may point out why looking solely at actual income inequality may not adequately capture the extent and the direction of social discontent about income distribution.

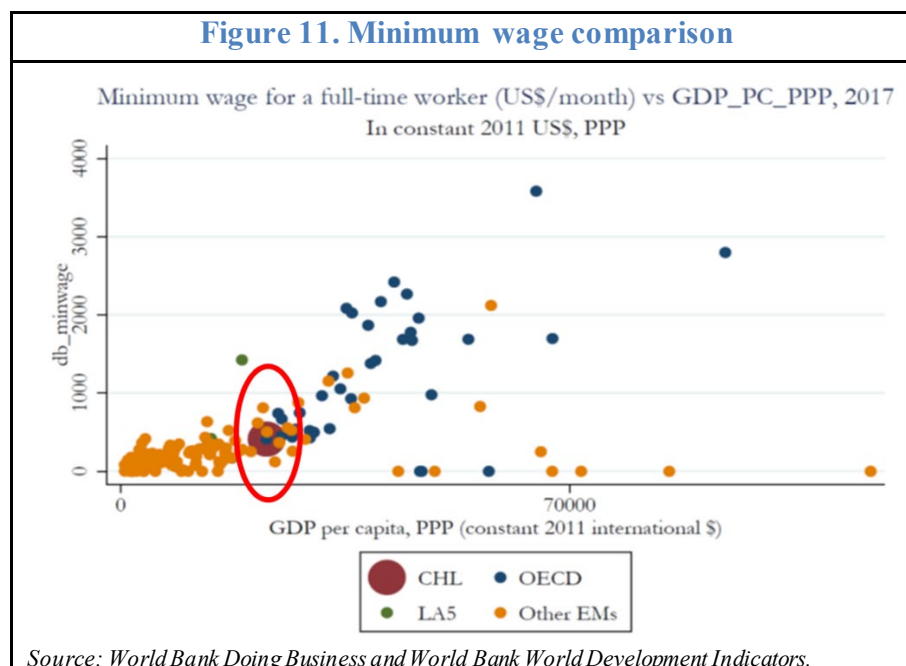
Figure 10. Perceived Inequality

C. Inequality of Access

The multidimensionality of the inequality concept may be adequately captured by what can be labeled as “inequality of access”—defined here as citizens’ unequal access to affordable essential goods and services. Across many countries, notwithstanding a general improvement in development indicators—including various income per capita measures—as well as income distribution indicators—such as Gini index and income shares—an increasing part of the population has been falling behind on the quality of access to services and goods that are essential for conducting normal lives. For instance, McKinsey (2020) hints that this is a global issue and concern, noting that “...rising housing prices, which account for 37 percent of general inflation, together with higher healthcare and education costs and spending, have absorbed between 54 and 107 percent of the gains in income for average households in Australia, France, the United Kingdom, and the United States since 2002.” The problem with ensuring access to affordable essential services—such as education, housing, and healthcare—is likely to be considerably more acute outside the advanced world given the deficiency of social support institutions in those countries. Hence, in this section our focus turns to comparing Chile’s indicators on access to affordable essential goods and services, including social spending, services, and cost of living.

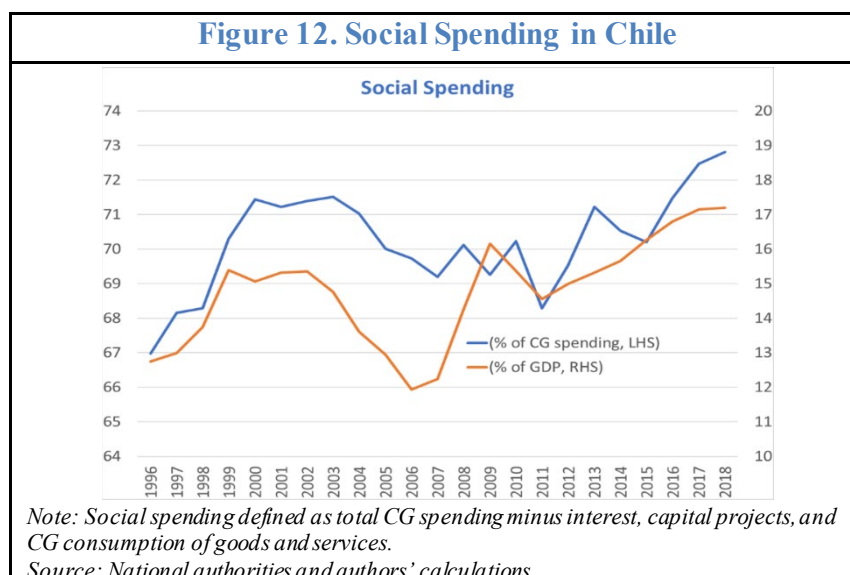
Minimum wage

The guaranteed minimum wage provides some indication about the potential purchasing power of workers at the lower end of the earnings distribution. Figure 11 attempts to provide a rough comparison of the minimum wages applicable in a broad set of countries in 2017 and their levels of income per capita. Chile’s minimum wage does not seem to deviate from the minimum wages in other countries with similar levels of income per capita. In fact, as Chile’s position is deeply within the “cloud” in Figure 11, one may argue that Chile’s minimum wage is broadly in line with the international standard given its level of development.



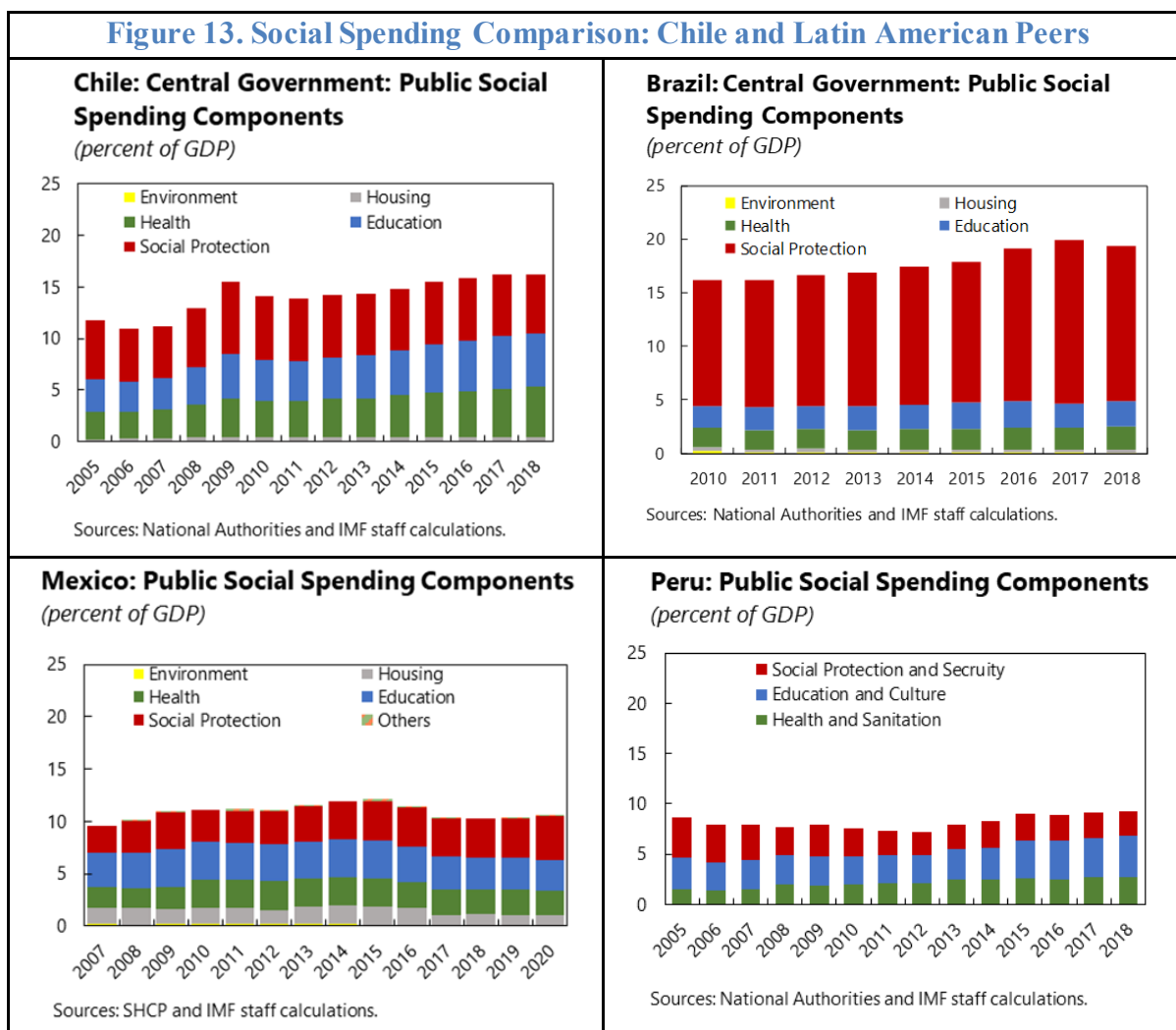
Social spending in Chile

Another important aspect about the population's potential access to essential services is captured by the support provided through public expenditure. Figure 12 depicts the evolution of social spending in Chile—defined as total central government spending minus interest, capital projects, and central government consumption of goods and services—over the past three decades. Overall, social spending has been increasing in Chile, both as a share of total government expenditure and as a share of GDP. Moreover, this upward trend has been particularly clear over the past decade, when Chile introduced a number of social programs (see IMF, 2018). Hence, these figures suggest that—on the aggregate—the higher social expenditure should have supported access to essential goods and services.



Comparison of social spending with regional peers

Given the broad range of definitions and numerous country-specific details, a comparison of social spending across countries is challenging. With this caveat in mind, in Figure 13 we make an attempt to compare social spending across a group of large Latin American economies (using the figures collected by the IMF's Fiscal Affairs Department). The charts in Figure 13 suggest that Chile's social spending is relatively high in a regional perspective. Overall social spending (as a share of GDP) in Chile is higher than in Mexico and Peru, and only slightly lower than in Brazil. In addition, Chile's spending on key social services—healthcare and education—is the highest among the regional peers, while its spending on social protection only lags behind Brazil.



Health spending

In Figure 14 we zoom in into the evolution of health spending—a critical element in ensuring access to essential services. We compare Chile's figures with those of comparator groups according to our standard 4-panel setup. There are four different dimensions of healthcare

spending we explore in this Figure: (i) overall current health expenditure; (ii) domestic government health expenditure; (iii) domestic private health expenditure; and (iv) household out-of-pocket health spending.

The first panel suggests that current health expenditure in Chile has been rising fast and is now high relative to Chile's path of development. In fact, the growth in health spending has been particularly fast over the past decade and a half, a period in which it increased by about 1½ percent of GDP (from about 6½ percent of GDP to about 8 percent of GDP). One important caveat is worth emphasizing regarding the figures for health spending: the increase over time has been partly due to higher prices, and not necessarily due to the provision of better or more health services.

The second and third panels of Figure 14 indicate that the increase in health spending in Chile has reflected both the increase in public health spending and the fast growth in private health spending. In fact, compared to the set of countries with similar development path, Chile's public healthcare spending increased somewhat faster over the last decade, while Chile's private health spending has remained consistently close to the top among this group of countries. A point worth noting is that private health spending in Chile has increased considerably faster than in other comparator groups over the past decade, moving from about 2.8 percent of GDP to about 3.3 percent of GDP.

Finally, an important category of health spending that can be especially sensitive for the population and possible source of discontent is out-of-pocket expenditure. The fourth panel in Figure 14 shows that households' out-of-pocket health payments in Chile have been at the top among the group of OECD countries (top-right chart) as well as at the very top among the countries with similar path of development as Chile's (bottom-right chart).

Figure 14. Chile and Comparators: Health Spending

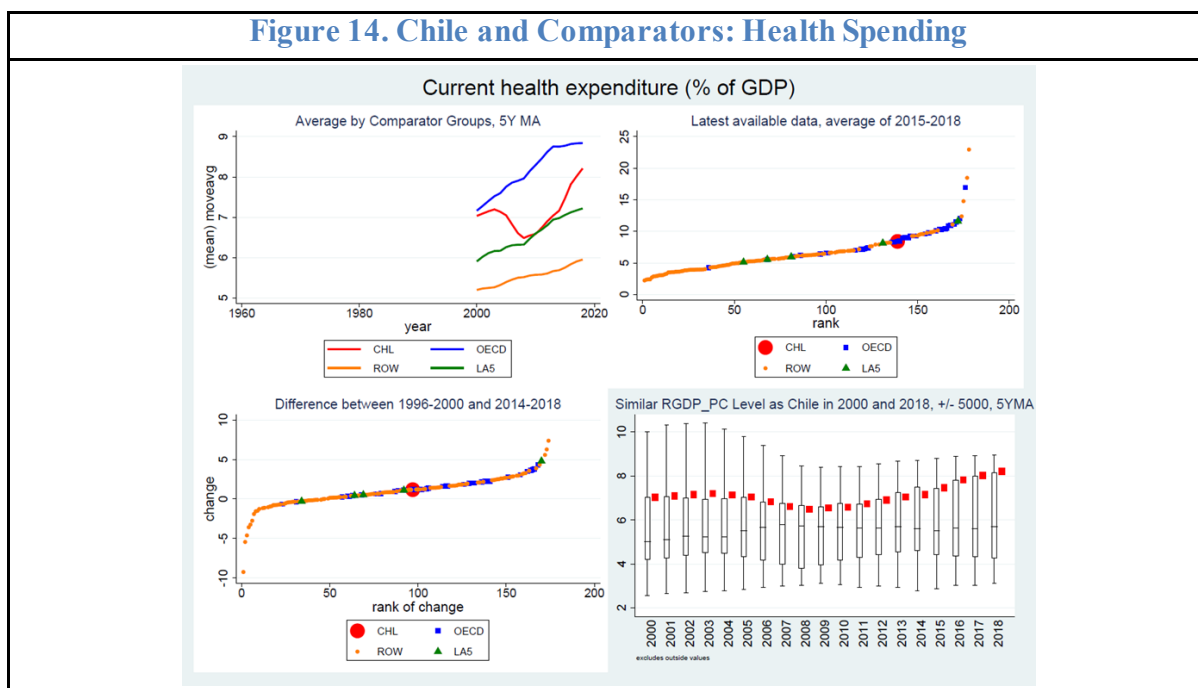


Figure 14. Chile and Comparators: Health Spending (Continued)

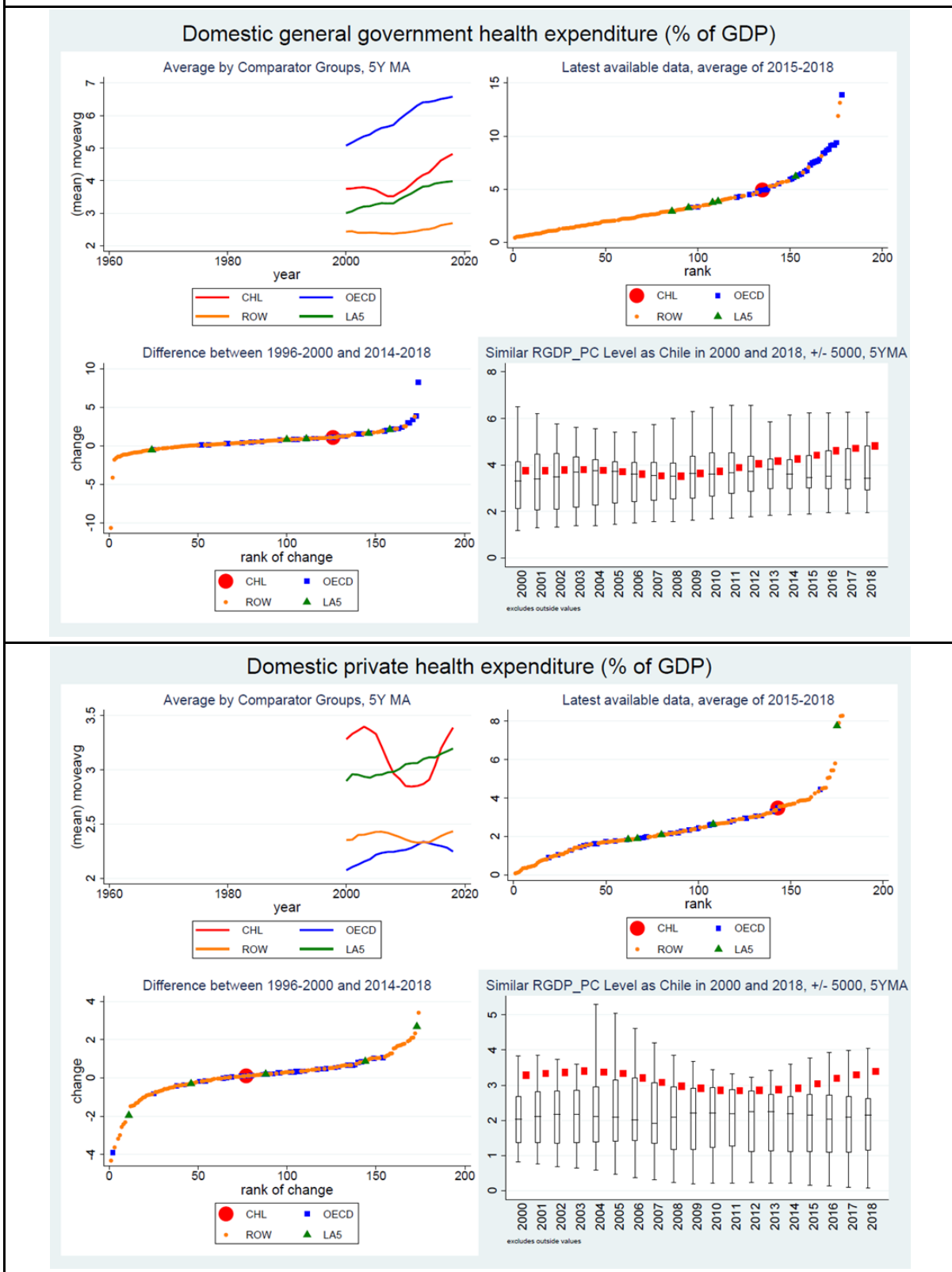
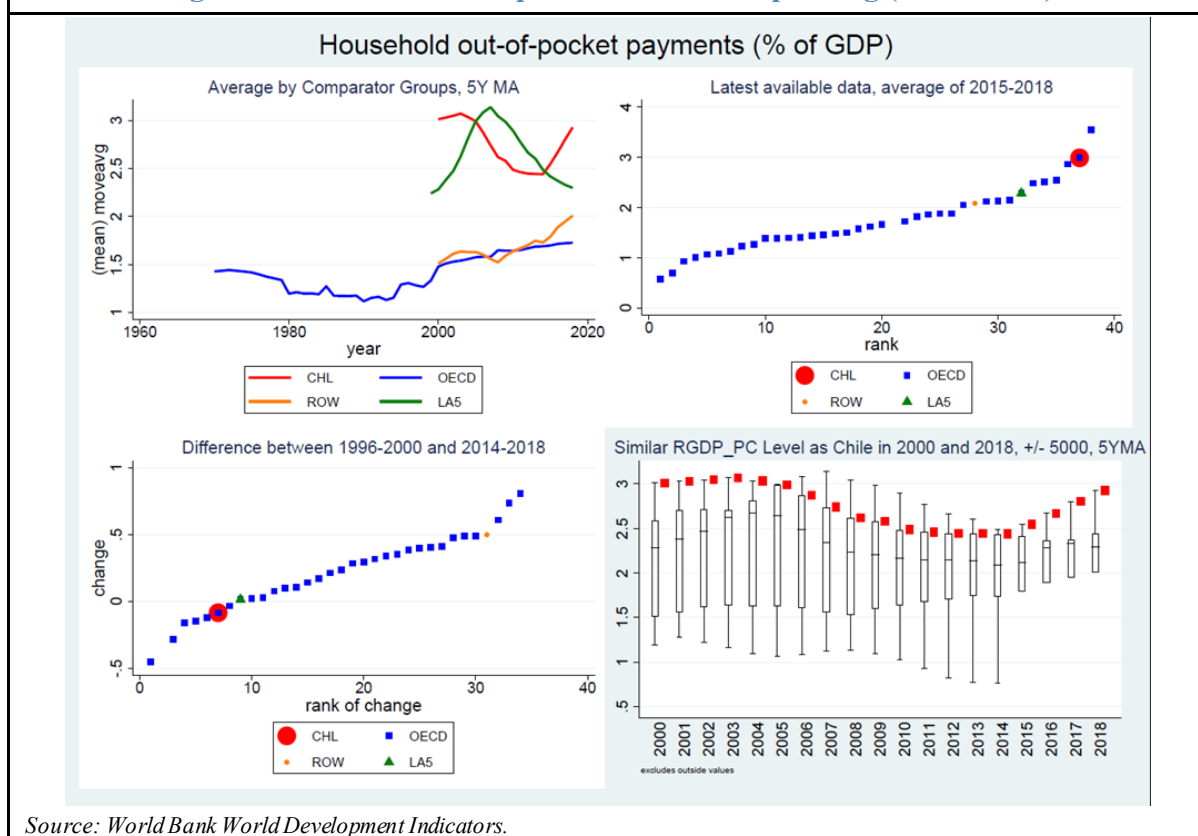
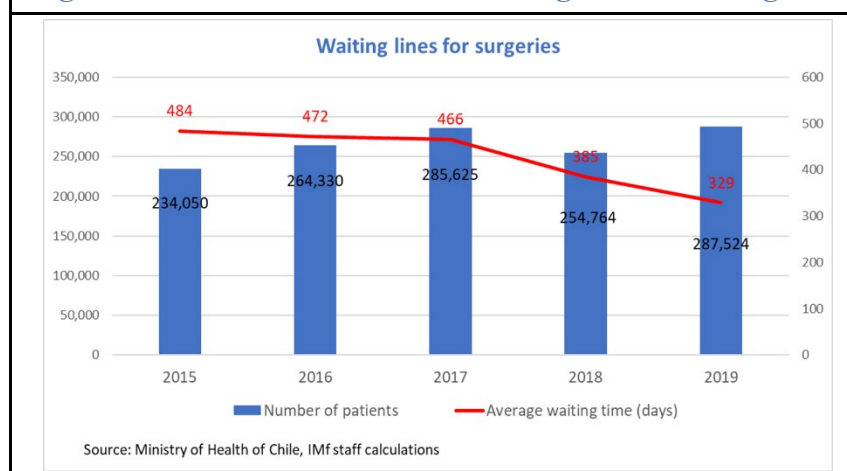


Figure 14. Chile and Comparators: Health Spending (Concluded)

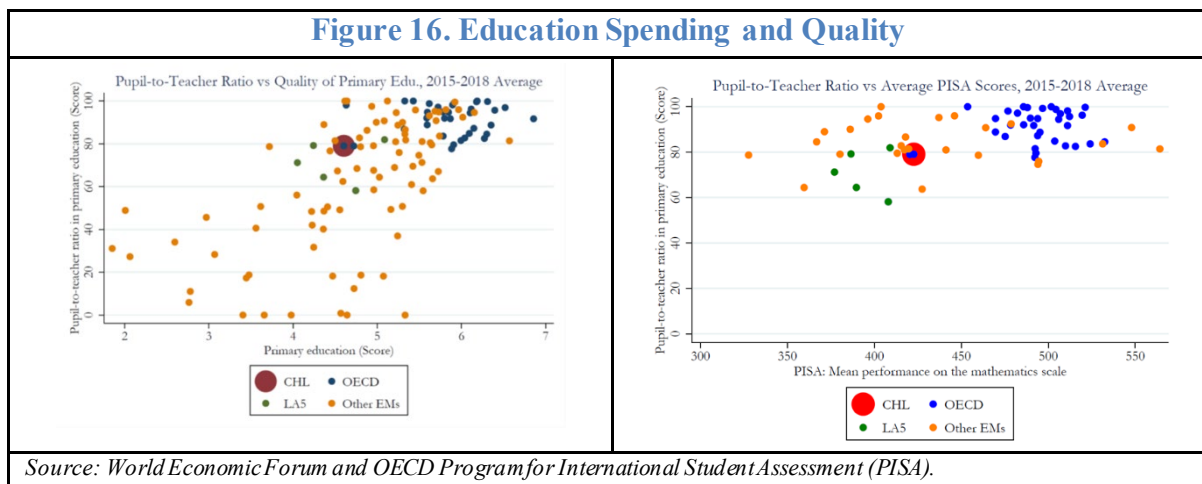
Nonetheless, notwithstanding a significant increase in health spending over the past decades, there have been continued complaints among the Chileans regarding the quality of health services (UNDP, 2017). While an analysis of the quality of health services goes way beyond the scope of this paper, in Figure 15 we aim to provide a glimpse into an indicator that has been repeatedly highlighted during the social unrest of 2019: very long waiting times. Figure 15 suggests that the average waiting time for a surgery in Chile has been between a year and a year and a half in recent years.

Figure 15. Healthcare in Chile: Waiting Lines for Surgeries

Education

Besides healthcare, education is another essential service determining citizens' prospects in life. Hence, unequal access to quality education plays an important role in fermenting other types of inequality. In Figures 16 and 17, we zoom in into some evidence about education spending and quality, and returns to education, respectively.

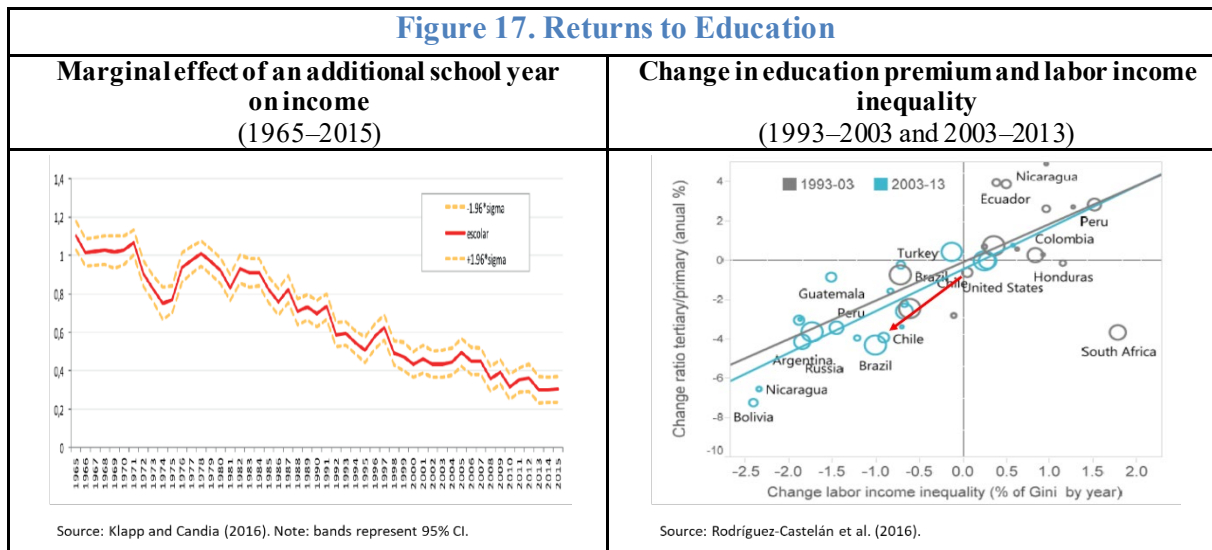
The horizontal axis in the panels in Figure 16 plots an indicator for the quality of education (which differs across the two panels), and the vertical axis provides an indicator for education spending. As an indicator for education quality on the horizontal axis, the left panel uses the score for primary education quality from the World Economic Forum's Global Competitiveness Report, while the right panel uses the PISA mean performance score in mathematics. Both charts measure education spending through the score for pupil-to-teacher ratio from the WEF's Global Competitiveness Report on the vertical axis. These charts suggest that, despite the resources per student being in line with international benchmarks, the quality of education in Chile is relatively low compared to OECD. Nonetheless, Chile's education quality is not low with respect to peers from Latin America: both its education spending and quality are one of the best among regional peers.



While spending and quality are two key indicators about the education system, an additional element that determines its broader socio-economic implications and effects is the return to education that students can obtain when joining the labor market. Figure 17 presents some evidence from studies documenting the returns to education and the evolution of the education premium. The left chart from Klapp and Candia (2016) shows that the marginal effect of an additional school year on income in Chile has been declining over the period 1965-2015. In turn, the right chart from Rodríguez-Castelán et al. (2016) provides evidence that the decline in the education premium has helped reduce income inequality: Chile's education premium (secondary/primary school) declined from 1993–2003 to 2003–2013 as depicted by the downwards movement along the vertical axis, while the country experienced a reduction in income inequality (Gini index) over the same period, as depicted by the leftward movement along the horizontal axis. Hence, while the decline in the returns to schooling and in the education premium may have contributed to the reduction in income

inequality, those developments may have led to unmet expectations of young graduates, creating further frustrations and social discontent.

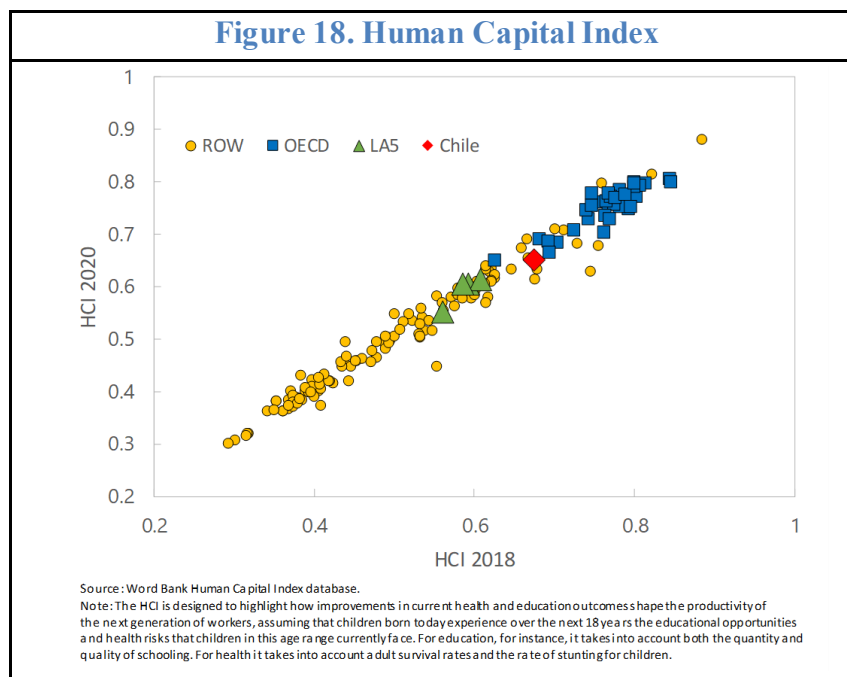
Figure 17. Returns to Education



Human Capital Index

Having presented some evidence about the level and evolution of specific indicators on education and health, we briefly turn to the World Bank's Human Capital Index (HCI). This index shows how improvements in current health and education outcomes can shape the productivity of the next generation of workers. Overall, Chile's HCI is lagging behind OECD, albeit it is reasonably high relative to EMDEs, and to LA5 peers.

Figure 18. Human Capital Index

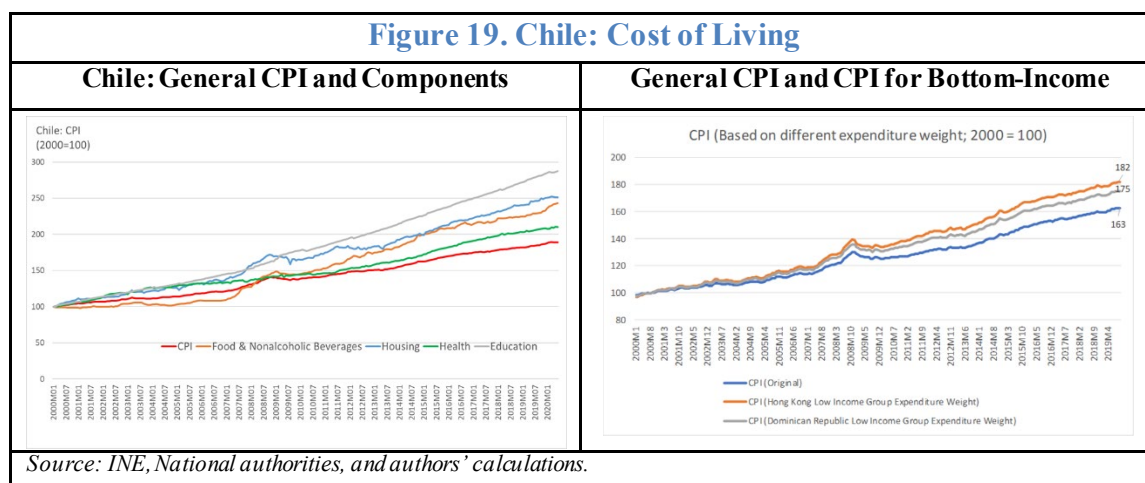


Cost of living

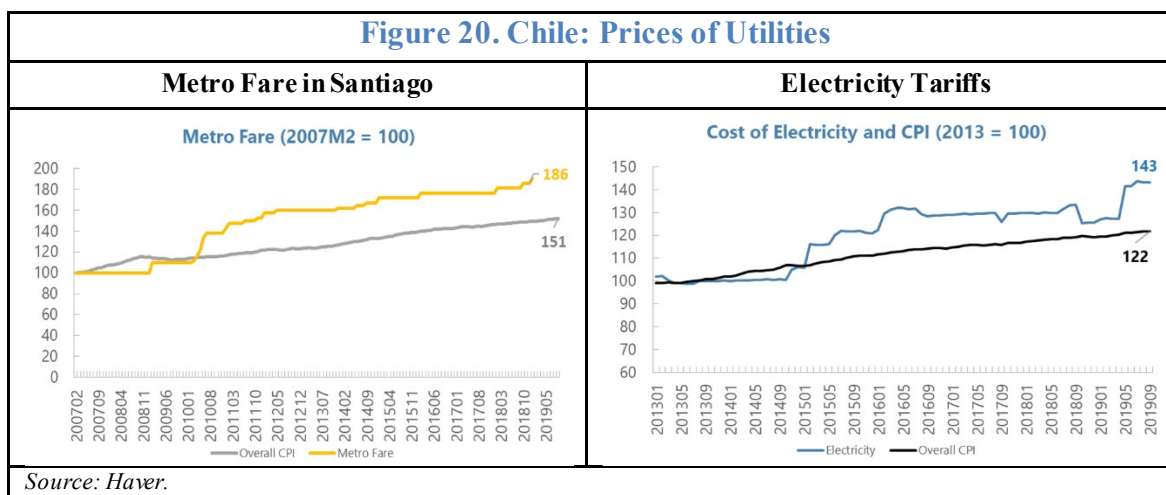
Besides the guaranteed minimum wage (or minimum income) and the provision by the public sector of some essential services and goods, a key element that determines the inequality in access (and/or exclusion) is the price charged for accessing those essential services and goods. In fact, looking at the general price level measured by the consumer price index may mask important differences in price levels faced by different consumers.

The left panel in Figure 19 shows that essential goods and services—such as food, health, education, and housing—increased considerably faster than the general CPI in Chile. While the general price level increased by about 100 percent over the period 2000–2020, the prices of those essential goods and services increased as follows: health by about 20 percentage points more than the general CPI, food by over 50 percentage points more, housing by about 60 percentage points more, and education by 100 percentage points more than the general CPI. In turn, to the extent that these categories represent a relatively larger share of the consumption basket for certain segments of the population, their cost of living grew considerably faster than what is implied by the headline inflation.

In the right panel of Figure 19 we attempt to provide a proxy about the CPI/inflation faced by the low-income segments of the population. As there are no official income-quintile-based measured of CPI in Chile, we approximate such CPI by using the expenditure weights based on other countries' low-income consumption baskets with large ranges of level of development (Dominican Republic and Hong Kong). This approximation suggests that the CPI facing low-income households may have increased by about 12–19 percentage points faster than the general CPI over the period 2000–2020.

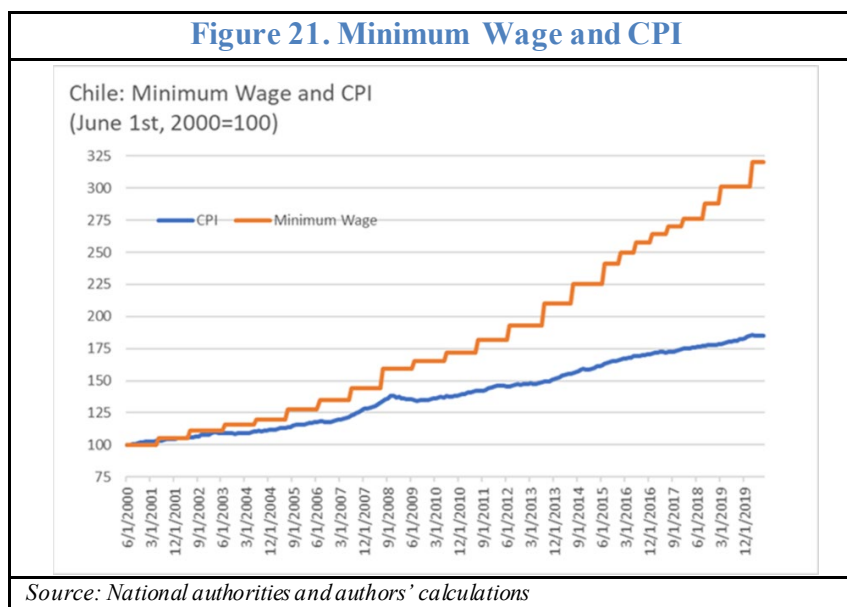


Similar to the picture depicted in Figure 19 for broad sub-components of the CPI basket, Figure 20 suggests that the prices of some essential utilities—which represent a relatively larger share of the expenditure baskets for low-income persons—increased faster than the general CPI in Chile. In fact, the Santiago metro fare—the raise of which acted as the immediate trigger of the October 2019 social unrest—increased by about 35 percentage points faster than CPI over the past twelve years, while the electricity tariff increased by about 20 percentage points faster than CPI over the past seven years.



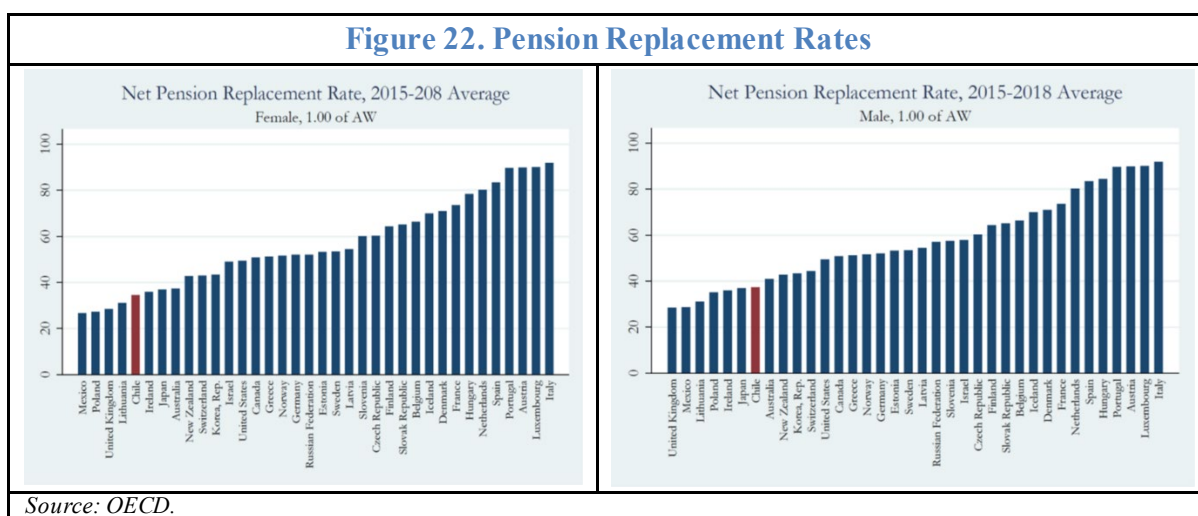
The evidence presented in Figures 19 and 20 suggests that low-income households may have lost purchasing power, and a corresponding degree of access to some essential services, faster than implied by the general CPI. In this context, however, it is also important to check what happened with the income evolution of low-income persons over time.

Figure 21 provides some insights into this – it shows that the minimum wage increased considerably faster than the general CPI, by almost double over the past twenty years. In fact, the cumulative increase in the minimum wage was larger than the increase in the prices of each essential category plotted in Figure 19. Hence, this evidence suggests that the purchasing power of persons earning the minimum wage may not have been affected adversely. At the same time, this evidence points at the need to explore in detail the impact of the rise in the cost of living across the income distribution – in particular, investigating whether the purchasing power of the lower/middle and middle class may have been more affected by the increase in prices of some necessities. More granular research on this topic is certainly promising, albeit it goes well beyond the scope of this paper.



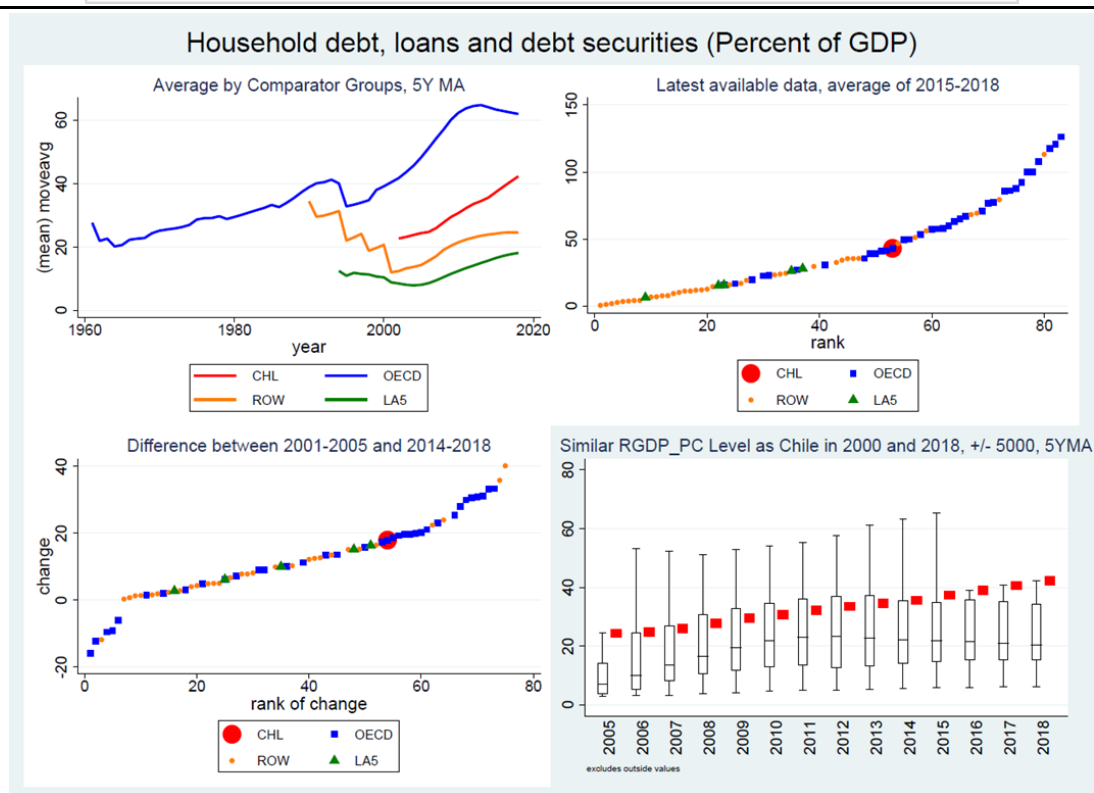
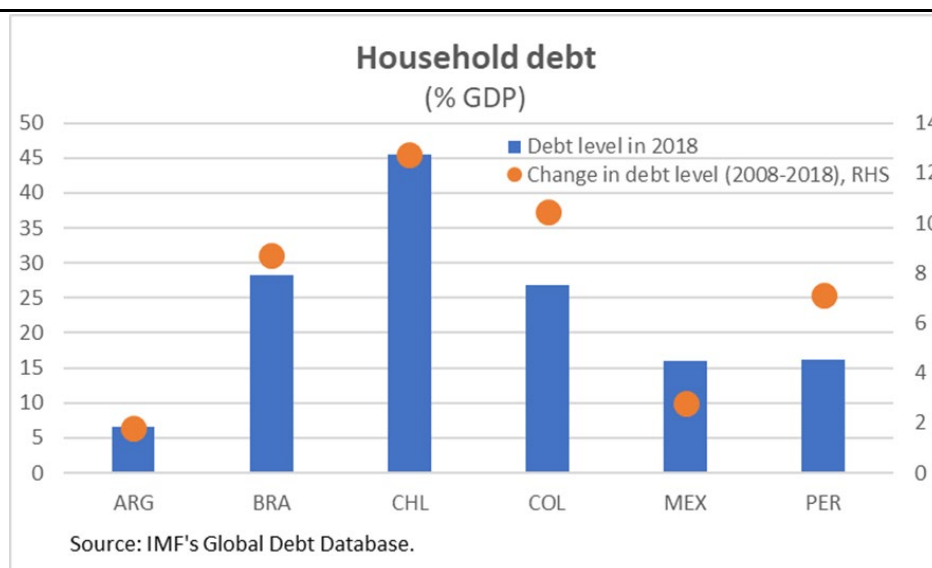
Pensions

Complaints about the level of pensions and the pension system more generally have been one of the most recurring issues during the social protests in late-2019. To provide a glimpse into this issue, in Figure 22 we present a simple cross-country comparison of pension replacement rates for OECD economies (based on pre-Covid-19 data). These charts suggest that replacement rates in Chile are low relative to OECD economies, and this deficiency is even more pronounced for females than for males. There are many reasons that contribute to such an outcome, including low contribution rates, poor contribution density, and under-reporting. Several recent studies provide a detailed analysis of Chile's complex pension system (IMF, 2021b; Evans and Pienknagura, forthcoming), and also document the expected impact of the 2020 early pension withdrawals.



Household indebtedness

Amid high and rapidly increasing cost of living, limited incomes and low pensions, many households have accumulated considerable amounts of debt. The upper panel of Figure 23 shows that household debt in Chile is not only higher than in any of the regional peers, but also increased faster over the past decade (2008-2018). In addition, the lower panel of Figure 23 shows the familiar four-panel-chart for household debt. Similar as the comparison across Latin American countries presented in the upper panel, the top-left chart of the lower panel shows that household indebtedness in Chile increased faster than in comparator countries over the past decade, while only the group of OECD countries experienced higher growth during the preceding decade. Moreover, Chile's level of household debt remains one of the highest among non-OECD countries globally (top-right chart) and its growth over the past two decades has been one of the fastest in the non-OECD world (bottom-left chart). Finally, Chile's household indebtedness has been at the top among countries with similar development paths (bottom-right chart).

Figure 23. Chile and Comparators: Household Indebtedness

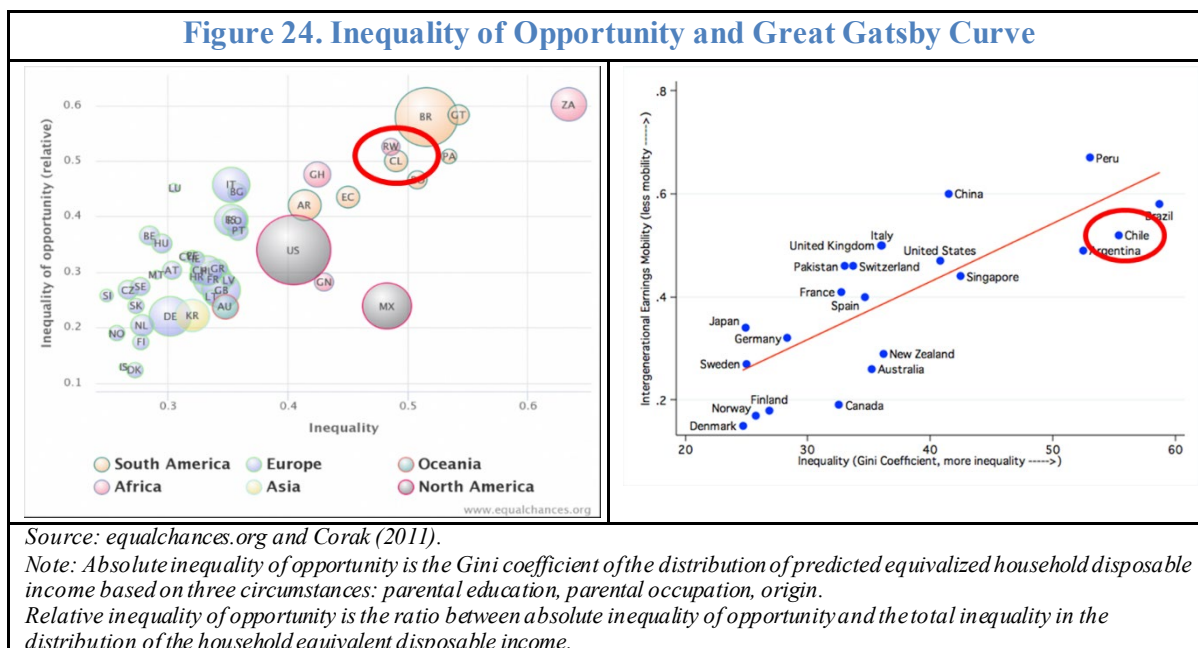
Source: World Bank World Development Indicators and OECD database.

D. Inequality of Opportunities

Having presented some evidence on three dimensions of inequality—income, perception, and access—we now turn to exploring the inequality of opportunity. Here, we follow Roemer (1998) and Ferreira and Gignoux (2008) in defining inequality of opportunity by the extent to which the inequality of outcomes that can be accounted for by pre-determined circumstances, such as race, gender, place of birth, and family background. In addition to presenting some findings based on methodologies commonly followed in investigating the concept of inequality of opportunity, here we broaden the discussion to related issues by presenting some findings about competition, political legitimacy, and freedom of making life choices.

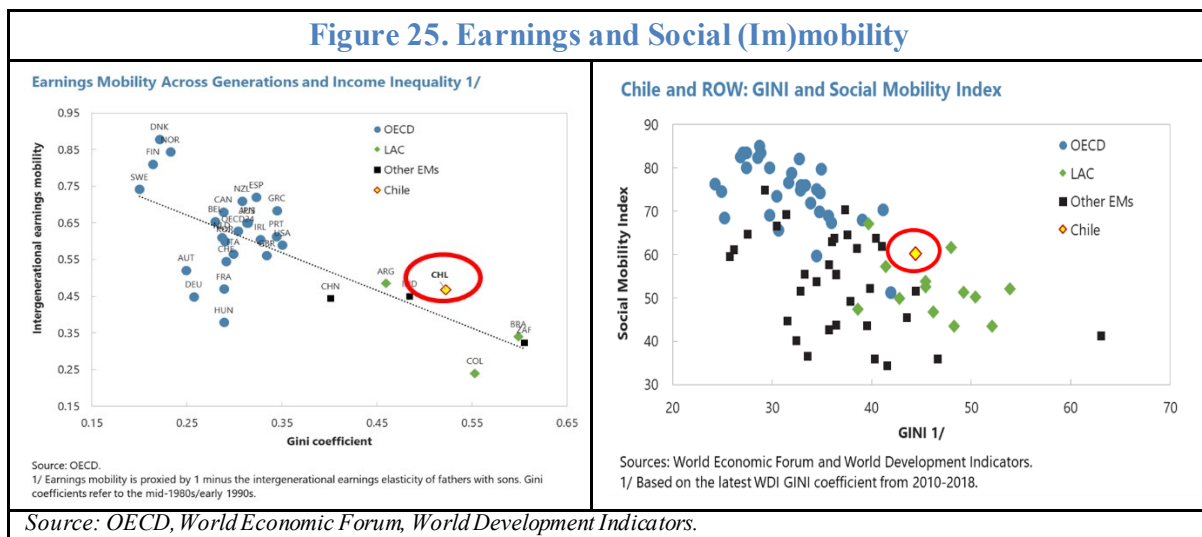
Figure 24 puts Chile's indicators related to inequality of opportunity in a cross-country perspective. The left chart depicts the positive relationship between income inequality measured by the Gini index (horizontal axis) and the (relative) inequality of opportunity (vertical axis), which suggests that inequality of opportunity accounts for a relatively larger share of overall income inequality in countries with higher income inequality. In this context, Chile is both one of the most unequal countries and one of the countries in which inequality of opportunity—based on circumstances pre-determined at birth—accounts for the largest share of overall inequality.

A similar picture seems to be conveyed by the right chart in Figure 24, which shows the “Great Gatsby Curve” documenting the positive relationship between income inequality and the lack of intergenerational earnings mobility. This chart shows that countries with higher income inequality levels also have higher persistence of inequality across generations. In this respect, Chile and the other regional peers from Latin America seem to constitute the set of countries with highest levels and highest persistence of inequality.

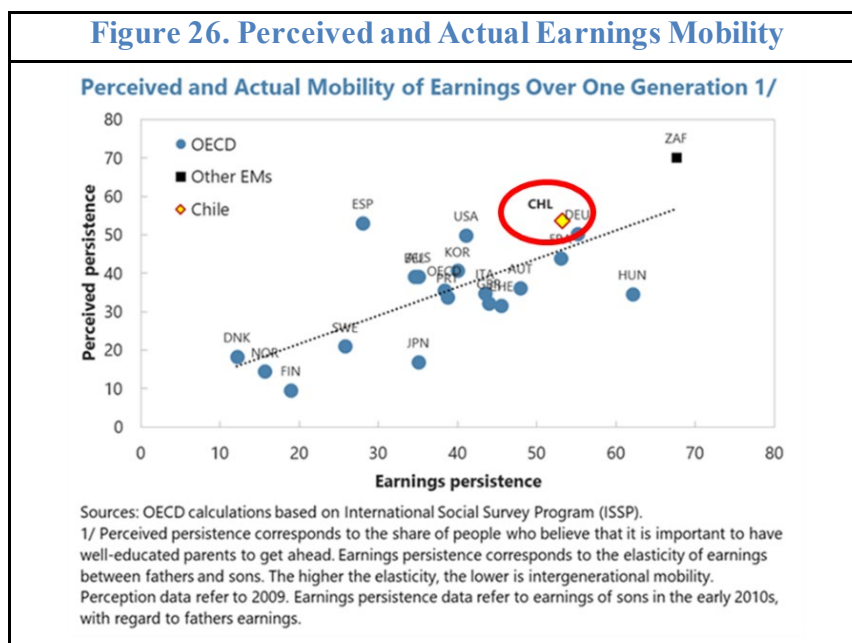


Using a broader dataset from the OECD, the left chart in Figure 25 confirms the evidence from the “Great Gatsby Curve” that countries with higher income inequality are also associated with lower earnings mobility across generations. Again, Chile and other Latin American peers find themselves in the lower right section of the chart, implying both high income inequality and lower earnings mobility than almost all OECD economies.

More broadly, the right panel of Figure 25 shows that—beyond earnings mobility—higher income inequality is also associated with lower social mobility, which is a broader and multidimensional concept composed of 10 pillars, including health, education, technology, and work conditions, among others (WEF, 2020). Similar as in the case of earnings mobility, Chile again fares considerably worse than other OECD countries, albeit better than almost all other Latin American peers.



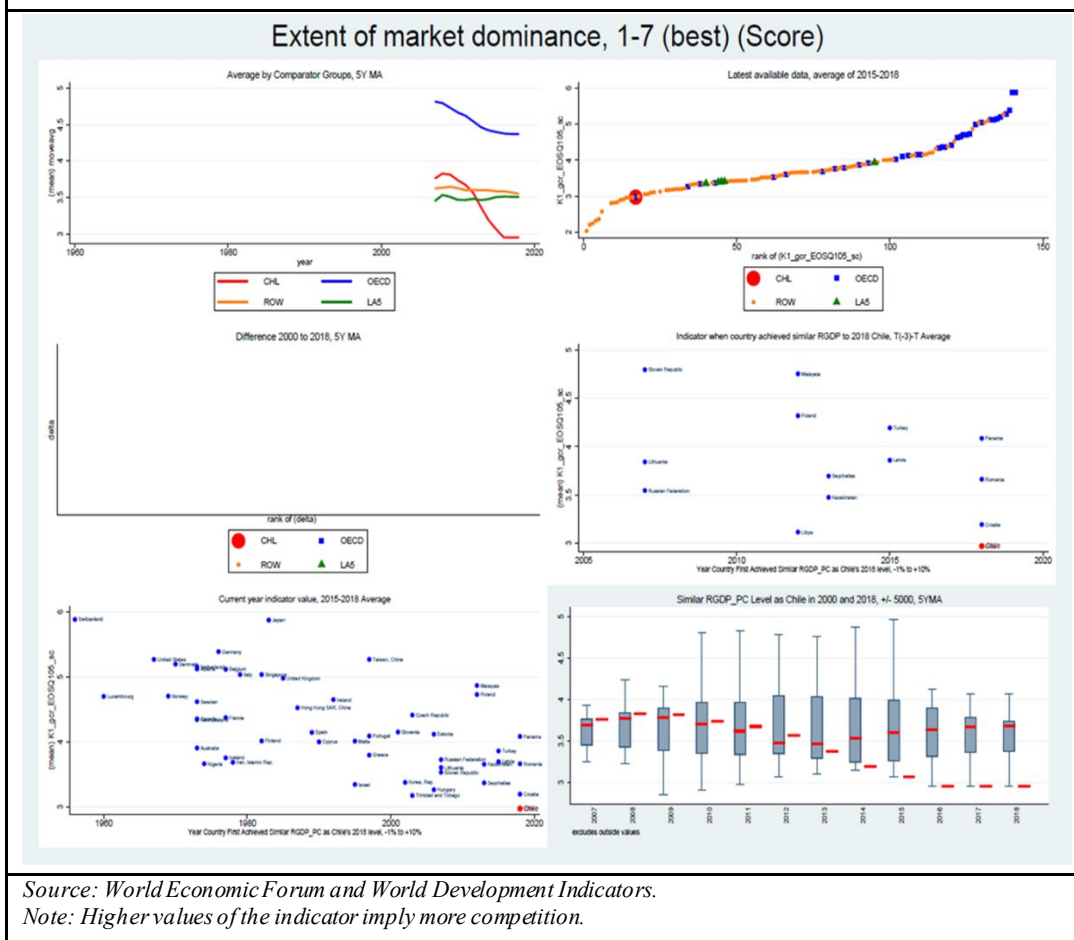
Finally, Figures 24 and 25 were based on measures of *actual* mobility across generations. As mentioned earlier in Section IV.B., perceptions could sometimes be at least as important as actual outcomes in determining social developments. Hence, Figure 26 provides some evidence about the relationship between the actual and the perceived earnings mobility across generations. The strong positive relationship shown in Figure 26 provides some indication that the findings based on actual outcomes in Figures 24 and 25 could be reasonably well generalized to perceptions as well, thereby reinforcing the negative nexus between income inequality and earnings/social persistence.



Competition

Fair competition is one of the key factors contributing to more equally shared opportunities. Hence, a set of policies that allow competition to thrive would help reduce the extent to which pre-determined circumstances—beyond the control of individuals—affect their chances for prosperity in life. Given the complexity of measuring how competitive a certain environment is, analyses on such issues generally rely on perceptions of competition.

Figure 27 presents some evidence about the perception of competition gauged by the responders' views about the extent of market dominance (higher value of the indicator means more competition). There are several important insights regarding Chile's position relative to other countries. First, competition is perceived to be declining in Chile over the past decade, and this deterioration has considerably lowered Chile's standing relative to other comparator groups (top-left panel chart). Second, the current level of competition in Chile is perceived to be very low in an international perspective, considerably lower than other OECD and even Latin American peers (top-right panel chart). Third, Chile's level of competition is low relative to countries with similar level (mid-right and bottom-left panel charts) and path of development (bottom-right panel chart). In fact, the latter finding is especially concerning because Chile dropped from being one of the more competitive in the mid-2000s to the least competitive position among the set of countries with similar development path in the latest years. While the findings presented in Figure 27 refer to perceptions about the extent of market dominance and competition, they may provide suggestive evidence about what areas may be key for leveling the playing field with a view to reaching an economy with more equally-shared opportunities.

Figure 27. Competition and Extent of Market Dominance

Political participation and legitimacy

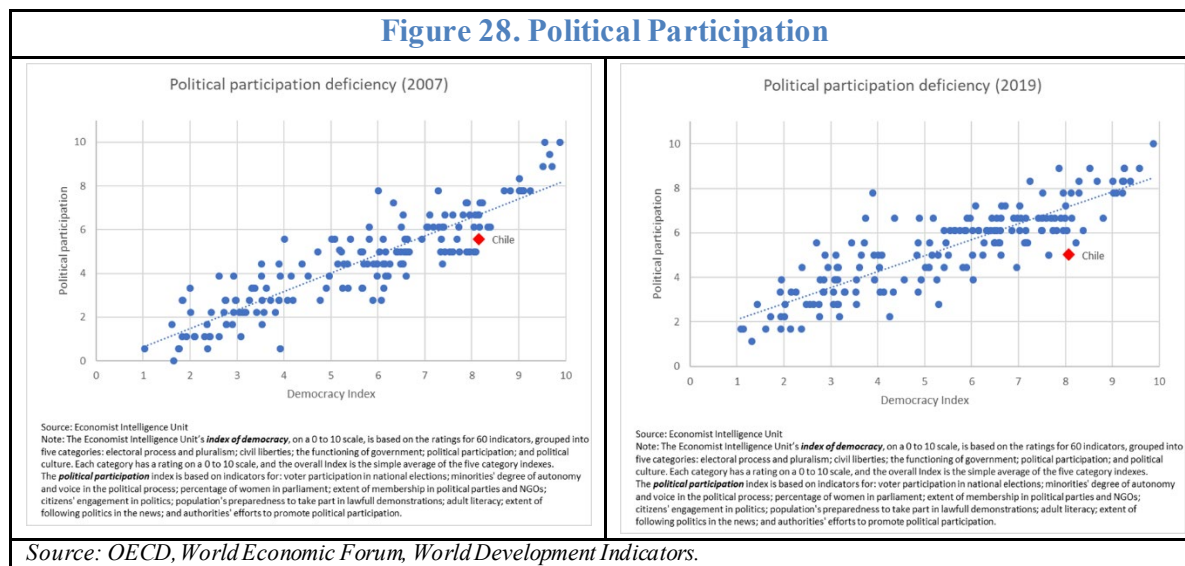
The chance to participate and influence the political process is one of the key factors shaping the (perception of) (in)equality of opportunities. In this context, some analysts point at the disconnect between the population and the political system as an important root cause of Chile's social unrest in 2019 (Jadresic, 2019).

In Figure 28, we present some suggestive evidence from The Economist Intelligence Unit's Index of Democracy, regarding the overall state of democracy (measured on the horizontal axis) and the extent of political participation (measured on the vertical axis).

While Chile is categorized as a full democracy (best category), with a better overall score on the index of democracy than various advanced countries, it fares considerably worse on one component of this index—the extent of political participation. In fact, Chile's political participation was relatively low given its overall democracy index score already in 2007 – the starting year of this metric. In the meantime, the other countries that found themselves in a similar situation as Chile in 2007 have generally improved the level of political participation, while Chile remained as an outlier with the lowest participation among countries with similar state of democracy. To some extent, this lack of improvement could reflect the legislative change from 2012 that abolished mandatory voting, but may also point at insufficient

improvements in the other elements that constitute the political participation index component. Overall, these suggestive findings may point at a potential disenfranchisement with the political process.

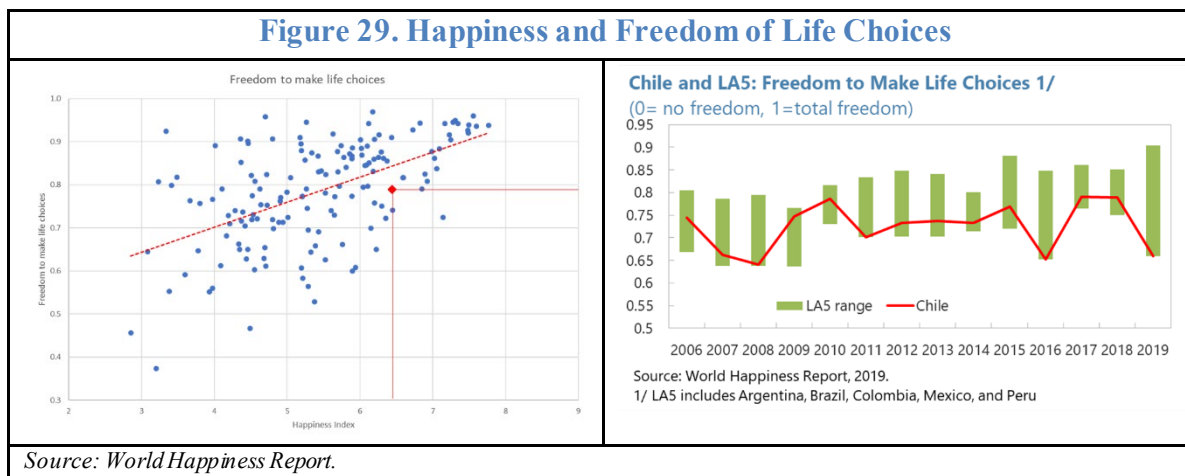
Figure 28. Political Participation



Freedom of choice

In various global happiness rankings, such the World Happiness Index, Chile seems to rank relatively high compared to regional peers. Nonetheless, Chile seems to rank low on one particular dimension of measuring happiness – the freedom to make life choices (Sachs, 2019). Figure 29 (left panel) suggests that Chileans indicate lower freedom to make life choices than any other country at the same or higher level of happiness, as gauged by the World Happiness Report. In addition, the right panel of Figure 29 indicates that Chile's score on freedom to make life choices compares poorly with its Latin America peers. While measuring happiness and its subcomponents is an exceptionally complex issues, the data presented in Figure 29 may provide some hints about the perceived lack of freedom to make life choices – an indicator that may also reflect impediments to more equal opportunities in society.

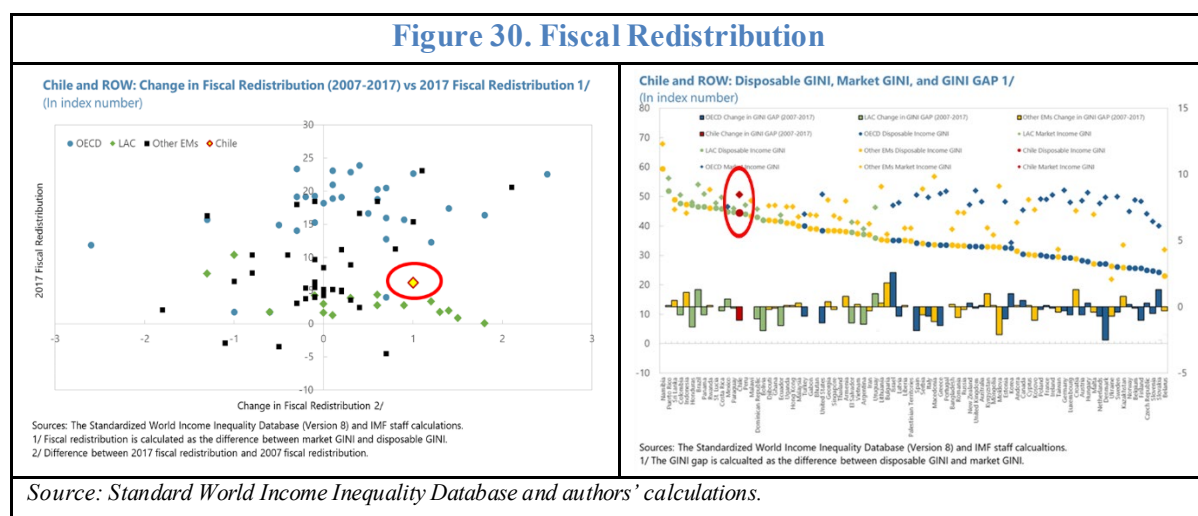
Figure 29. Happiness and Freedom of Life Choices



E. Inequality of Redistribution

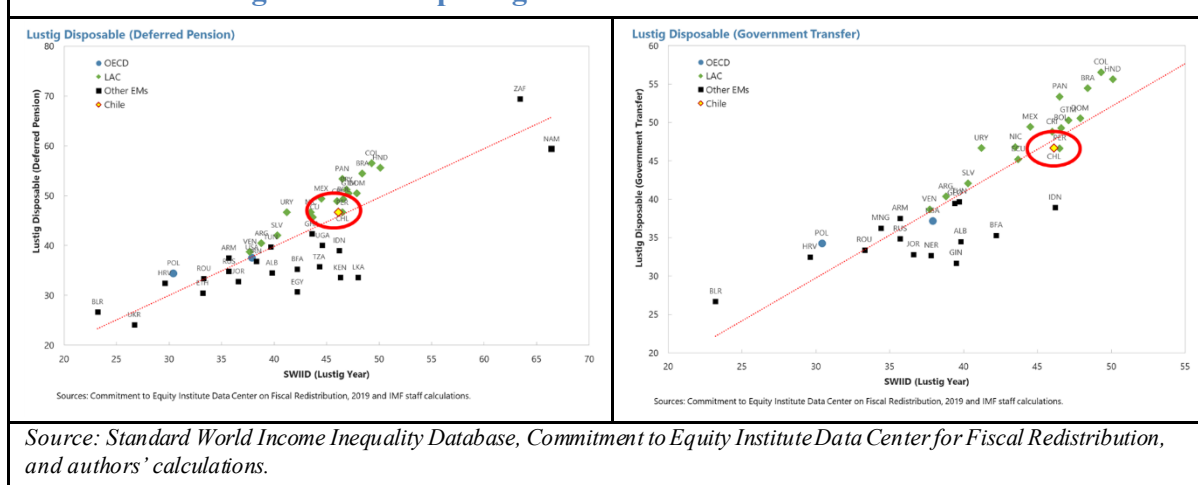
The fifth dimension of inequality we explore in this paper—inequality of redistribution—is a dimension more closely related to macroeconomic policy. In fact, fiscal policy provisions determine the extent to which resources are redistributed through the system of revenues and expenditure. How does the fiscal redistribution in Chile compare with other countries?

Figure 30 places Chile's fiscal redistribution—measured as the difference between market Gini and disposable Gini—in an international perspective by comparison with other countries. The left panel chart compares the change in the fiscal redistribution over the period 2007-2017 (on the horizontal axis) with the level of redistribution in 2017 (on the vertical axis). This left panel chart suggests that the fiscal redistribution in Chile over the decade 2007-2017 improved more than in other countries, as captured by the distance from the origin on the horizontal axis. However, the overall level of redistribution in Chile still remains low in an international comparison – it is below almost all OECD peers and many other EMEs, albeit higher than most Latin American countries, as indicated by the vertical axis. A similar picture is conveyed by the right panel chart of Figure 30, which ranks countries in terms of their disposable post-taxes Gini index. Chile's income inequality after taking into account fiscal redistribution remains among the highest in the world. Notwithstanding a considerable redistribution—measured by the difference between the diamonds and circles in the chart—Chile keeps lagging substantially behind OECD economies.



How much do the observations presented in Figure 30 depend on the exact source of income inequality measure? The findings in Figure 30 were based on data series for market and disposable Gini from the Standard World Income Inequality Database (SWIID). Nonetheless, the main observations for Chile remain valid when using the refined measures of disposable Gini by the Commitment to Equity Institute Data Center for Fiscal Redistribution. Figure 31 shows that the SWIID measures are closely related to the latter, particularly for Chile, albeit they may differ more markedly for specific other countries.

Figure 31. Comparing Measures of Fiscal Redistribution



In light of the indicative findings presented in Figure 30, it is essential to explore both revenue and expenditure sides in order to better understand Chile's fiscal redistribution. Figures 32 and 33 provide some evidence about fiscal revenues in Chile. Figure 32 shows that declining mining revenues have imposed higher reliance on standard revenue sources in Chile. In fact, Chile could rely much more on mining revenues in the past compare to the recent years, implying that the standard revenue sources—such as income taxes and VAT—have become more relevant over time.

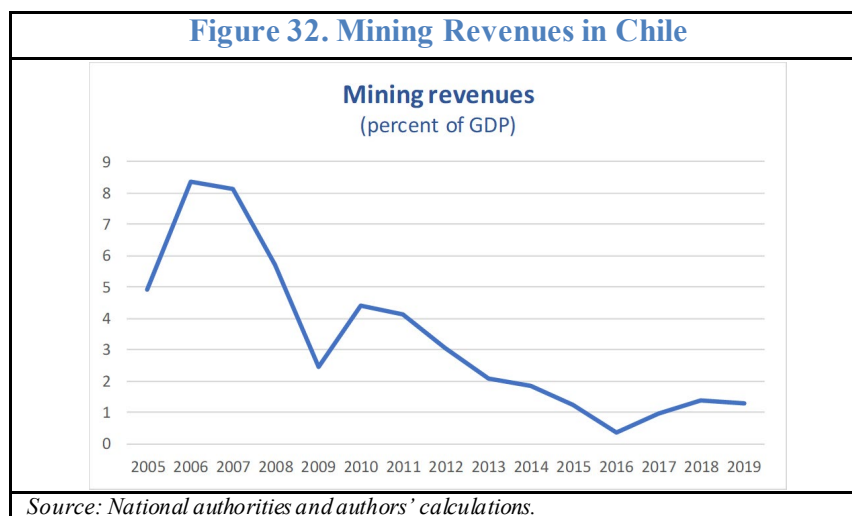
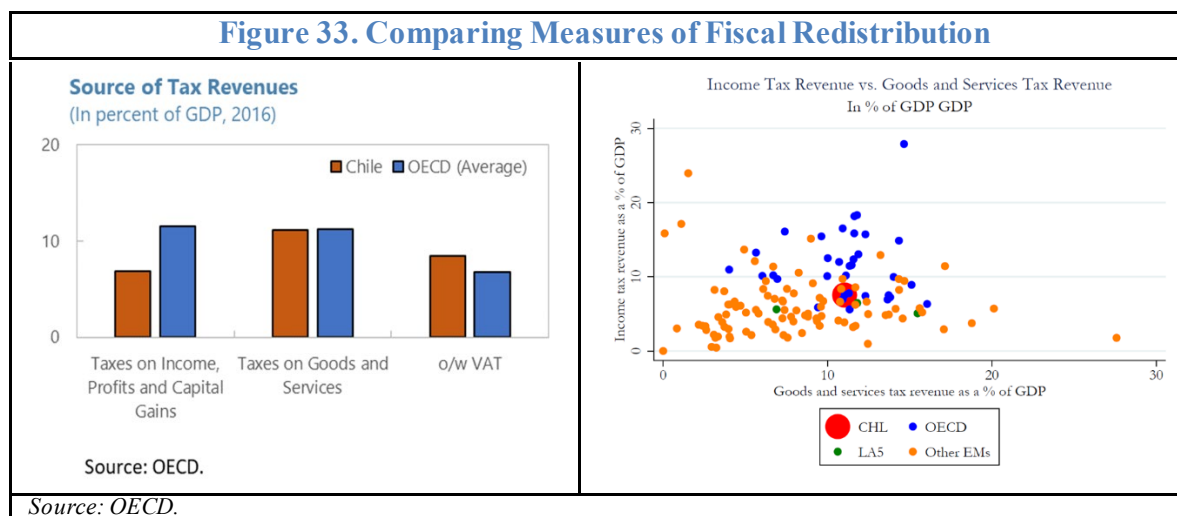
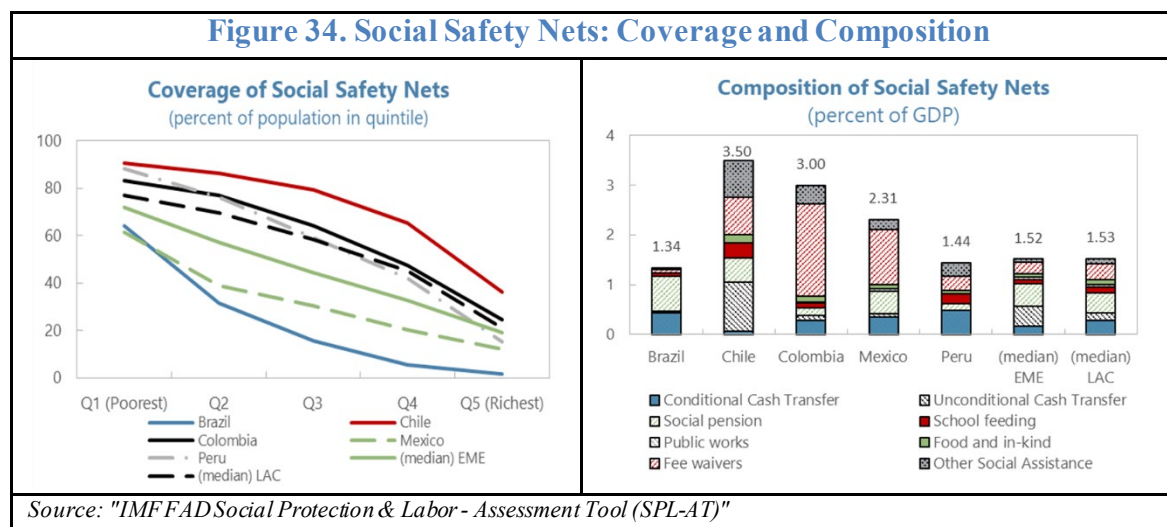


Figure 33 zooms in into these standard non-mining sources of revenue. The left panel chart indicates that income taxes (on income, profits, and capital gains) in Chile are relatively low compared to the OECD average, while VAT collection is somewhat higher. In turn, the right panel of Figure 33 plots income tax revenues against revenues from taxes on goods and services. Overall, Chile's reliance on VAT seems relatively high (close to the OECD median), while its reliance on income taxes is considerably lower than the majority of OECD peers. For a more detailed recent analysis of Chile's tax revenues, see IMF (2021b).

Figure 33. Comparing Measures of Fiscal Redistribution

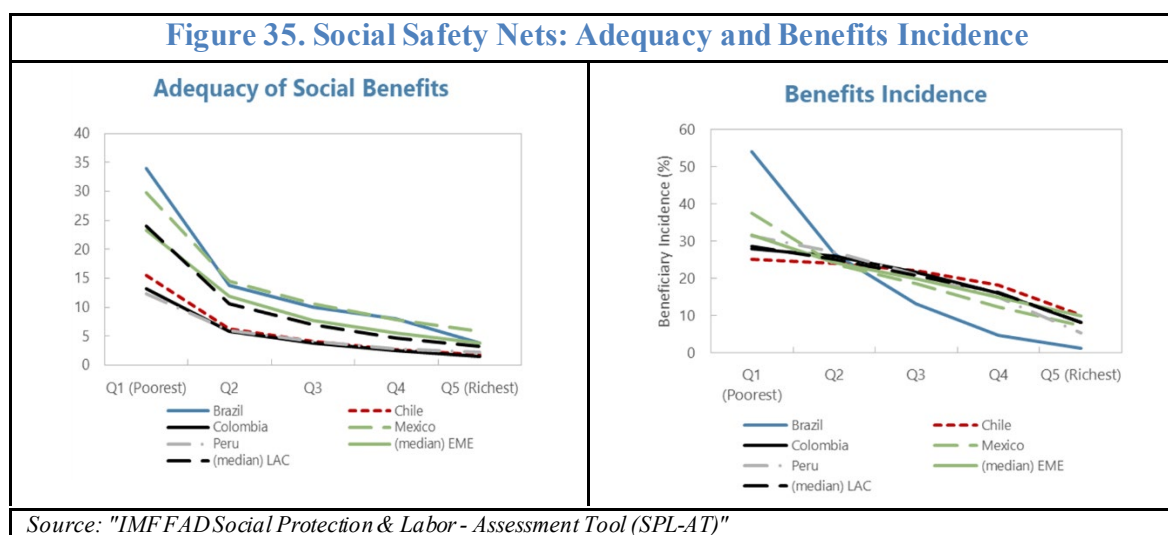
Having presented some suggestive findings on the revenue side, our attention now shifts to the expenditure side. When exploring the components of fiscal redistribution, the social safety nets represent a cornerstone of any analysis. Hence, Figures 34 and 35 provide some insights about the coverage, incidence, and adequacy of social safety nets (SSNs) in Chile and regional peers.

Figure 34 indicates that Chile has higher coverage across all income quintiles and larger overall SSNs relative to regional peers. Nonetheless, looking at the composition of SSNs in the right panel chart of Figure 34 suggests that the largest advantage of Chile relative to other countries is in the categories unconditional cash transfers and other social assistance, hinting at possible issues with the efficiency of targeting in some of these SSNs.

Figure 34. Social Safety Nets: Coverage and Composition

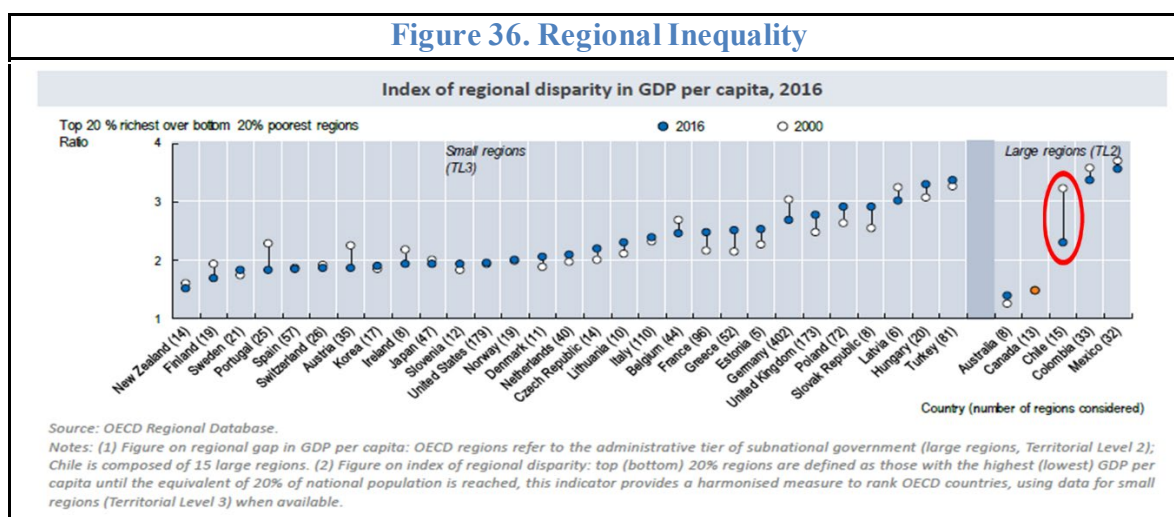
Indeed, the findings in Figure 35 suggest that there is space to improve the adequacy of Chile's SSNs across all income quintiles, given that Chile is one of the three countries with lowest level of adequacy. Moreover, the right chart implies that benefits incidence in Chile is relatively lower (higher) for poorer (richer) quintiles compared to the regional peers. Overall,

Chile's SSNs provide broader coverage and represent larger share of GDP relative to regional peers, but there is ample space to enhance adequacy and the benefits incidence of these SSNs.



F. Inequality Across Regions

The last dimension of inequality refers to the disparity of income across regions. Given its geographic diversity and extensive territory, regional disparities may be an important determinant of aggregate inequality outcomes in Chile. Figure 36 provides some evidence from the OECD about the disparity in the level of GDP per capita across regions. It suggests that Chile had one of the highest levels of regional inequality across the OECD membership in 2000, but managed to make a substantial improvement over the period 2000-2016. In fact, the index measuring the ratio of the top 20 percent (richest) over the bottom 20 percent (poorest) suggests that Chile achieved the largest improvement in cross-regional income distribution among the OECD members. In turn, this improvement has placed Chile's regional inequality in the middle of the OECD membership.



V. OBSERVATIONS ON POSSIBLE POLICY ACTIONS

The descriptive findings about the different inequality dimensions presented in Section IV provided insights about areas in which Chile seems to be performing relatively strong as well as other areas in which it seems to be underperforming in an international perspective. Hence, while these are largely indicative findings, they could likely point toward possible policy areas that could be reviewed in order to identify actions that could potentially improve Chile's conditions. Without pretending to be prescriptive or comprehensive, here we provide some initial observations that could help strengthen Chile's relative position in several of these inequality dimensions.⁶

- *Pensions system*: in light of the relatively weak replacement rates and reported social discontent about some aspects of the pension system, possible policy action include: increasing contribution rates; deepening contribution density by reducing informality as well as facilitating employment for senior citizens; broadening solidarity terms; and anchoring the retirement age to demographics trends.
- *Healthcare*: amid the sharp increase in healthcare costs in the last decade, there is a need to contain costs, including on medicines, as well as improve access and timeliness of service delivery. The authorities' recent and ongoing initiatives are moving in this direction. For instance, the authorities aimed for lowering the out-of-pocket cost of medicines by expanding the list of generic brands and imports, and requesting doctors to prescribe medicines based on the key active ingredient and not the brand. Moreover, the health system is likely to benefit from the authorities' current proposals to: i) strengthen the efficiency, governance, and risk management of the public system (FONASA); ii) create a basic universal health plan, which would increase transparency and competition; iii) increase solidarity of the private segment by eliminating pre-existing conditions and gender discrimination; and iv) ensure that the public and private providers guarantee the same price to both men and women of a given age.
- *Education*: measures that aim at enhancing the quality of education will be important for facilitating intergenerational mobility, an area in which Chile keeps lagging substantially behind the advanced economies. In this context, further improving the quality of education would require expanding and strengthening programs that monitor teacher performance and that align teacher career incentives to student performance. In addition, to tackle skill mismatches, it would be essential for the competent public institutions to deepen efforts towards providing transparent and up-to-date career information to students and promoting a more active engagement between employers and education providers (such as via internships), and further build on the recent welcome pilot for a centralized platform for job placement and training.

⁶ For a comprehensive coverage of a broad set of policy recommendations, see IMF (2021a).

- *Taxation*: in addition to the rationalization of expenditure and streamlining tax exemptions, there will likely be a need to increase income taxes over the medium term, and rebalance the direct/indirect composition of taxation in favor of the former.
- *Competition*: in light of the suggestive evidence that the extent of market dominance is perceived to have worsened, it would be useful to further improve competition and efficiency with policies geared towards streamlining regulation, reducing barriers to entry, promoting efficiency in the public sector, and leveling the playing field in key services sectors (particularly network industries).
- *Public services*: the findings suggest that there is space to enhance quality, efficiency, and access to public services. In addition, it will be important to ensure affordable transportation (especially for commuting to work) and review the price formation mechanism for utilities.
- *Social safety nets*: while acknowledging the good coverage and overall size of the SSNs, the focus in the future should likely be on improving adequacy and finetuning benefits incidence, with a particular attention to the benefits incidence of the lower income quintiles.
- *Labor market*: while not being the specific focus of our analysis, the labor market plays an important role in societal cohesion. Some of the actions that could likely improve labor market functioning include: reducing informality, introducing flexibility in the working schedule and location, discouraging high labor turnover, promoting female labor force participation (especially via the ongoing plans to introduce a universal childcare system), reevaluating workers' training programs, and facilitating formal youth employment by promoting a combination of work and study. More broadly, reviewing severance costs and dismissal procedures, and widening the eligibility for severance benefits coverage could be considered, to support job creation, improve labor market resilience, and facilitate labor mobility.

VI. CONCLUDING REMARKS

In view of the scale, scope, and complexity of the social unrest that came as a surprise for Chile in late 2019, this paper aims to shed light on Chile's social development in an international perspective in an attempt to understand the underlying processes possibly leading to the outburst of social discontent. It provides a broad descriptive overview of Chile's social issues, following a non-standard eclectic approach that aims to describe the evolution of a broad set of social issues in Chile in order to place the 2019 social unrest in an international perspective.

Notwithstanding Chile's sound macroeconomic performance over the past three decades, with strong growth and substantial poverty reduction, and sustained by strong macroeconomic institutions, the country continues to face important social challenges, analyzed here through the prism of six dimensions of inequality.

First, *income inequality* declined substantially, but remains among the highest compared to countries with similar level and path of development. In fact, this remains especially true for

extreme inequality, placing Chile at the “inequality frontier” in relation to its level of development, as no country with Chile’s or higher level of income is currently facing Chile’s level of income inequality.

Second, complementing actual with perceived outcomes, we provide suggestive evidence that Chile has the highest gap between *perceived and actual inequality* in Latin America. Moreover, it is one of the few countries with declining inequality in recent past where perceived inequality actually increased.

Third, while Chile’s minimum wage seems to be in line with international standards and social spending has increased in recent decades, *inequality of access* to essential affordable services and goods remains critical. For instance, private health spending increased faster than in comparator countries, albeit people keep complaining about wait times and costs. In addition, cost of living is rising fast for the poor, and education quality and pensions are relatively weak. Overall, amid all these circumstances, in order to gain access to some essential services, households kept increasing debt, which is high and is rising faster compared to peers.

Fourth, *inequality of opportunity*—defined as the extent to which the inequality of outcomes that can be accounted for by pre-determined circumstances, such as race, gender, place of birth, and family background—is high in international perspective. Moreover, competition is perceived as limited, and market dominance as high. The stagnant political participation, despite Chile’s inclusion among the world’s full democracies, hint at possible disenfranchisement from some elements of the political system.

Fifth, *fiscal redistribution* improved significantly, but remains low by international standards. On the revenue side, income tax remains low by international standards, while reliance on VAT is quite large. On expenditure, social safety nets seem to show high coverage, but also point at significant space for improvement of their adequacy and benefits incidence.

Sixth, Chile’s *regional inequality* improved substantially over the past two decades, placing Chile in the middle of the OECD countries, better than in some Latin American peers.

Finally, while none of those factors alone may provide a sufficient explanation for the social unrest in Chile, jointly they may provide valuable insights into some underlying root causes of the social discontent. Hence, the complex mosaic of factors transcending these six dimensions of inequality could have a potential to shed light on some aspects leading to the social unrest in Chile. One important lesson from the analysis is that, not only actual outcomes play a role, but also perceptions and expectations are crucial. And in countries that undergo rapid economic progress, such as Chile in the last decades, expectations may have moved even faster. Hence, a key question left for further analysis refers to the extent to which Chile’s social discontent may be captured and explained by De Tocqueville Paradox: “as social conditions and opportunities improve, social frustration grows more quickly” (Ferreira and Schoch, 2020).

ANNEX I

Data Sources
IMF World Economic Outlook
World Bank World Development Indicators
LAC Equity Lab
CEDLAS
Standardized World Income Inequality Database (SWIID)
OECD Indicators
World Economic Forum Global Competitiveness Index Database
World Bank Human Capital Index Database
IMF Global Debt Database
IMF FAD Social Protection & Labor - Assessment Tool (SPL-AT)
Economist Intelligence Unit
World Happiness Report
Commitment to Equity Institute Data Center on Fiscal Redistribution
Haver
National authorities databases

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