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July 25, 2024

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Abstract

This paper explores the nature and drivers of inequality in Chile. It is a companion paper to Lecaros et al (2023) that analyzed the widespread citizen perceptions and concerns over high inequalities and lack of fairness in Chile. A central theme is that Chile is in a form of "inequality trap", in which reinforcing elements of the system perpetuate inequality. This is in spite of the democratic transition of 1990, significant growth, and the large expansion of social provisioning. Chile has been successful with respect to poverty: there has been a dramatic reduction in absolute income poverty, and a near-universal floor for education, health, and pensions, albeit with pervasive issues of quality. However, most dimensions of inequality are perpetuated through structural features of the socio-economic system. These include: the inter-generational transmission of financial, human, social and cultural capital—notably through the education system; concentrated ownership in the business sector; a segmented labor market; and inequalities in access to mechanisms for managing employment and health risks and income insecurity in old age. There is a polarized discourse around the "neoliberal" model, but the real issues concern how structural inequalities interact with both market and government forces. There is no panacea, but there is substantial scope for public action that can tackle unjustified inequalities while also supporting efficiency. The kinds of systemic change required echo—if in new forms—the large-scale policy and institutional changes that now-industrialized countries went through in the 20th century, that were only partially modified by the "neoliberal" reversal from around the 1980s. These were underpinned by major political conjunctures, and there is an important outstanding question as to whether Chile's politics can support the kinds of changes needed.

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Introduction

This paper explores the dimensions and drivers of inequality in Chile. It argues that Chile has persistent high inequality, in spite of the 1990 democratic transition, substantial economic growth and major expansion in education and other social provisioning. This is interpreted as a form of "inequality trap", in which inequality-reinforcing forces outweigh countervailing inequality-reducing forces. It is further argued that most inequalities in Chile are bad for long-run development and growth.

This is second of two papers on Chilean inequality.

In the first part (Lecaros et al, 2023), we explored a variety of sources of citizens' views, as well as "objective" measures of differences across various dimensions. The main message was "The Street was Right" (*La Calle Tenía Razón*) in the sense of reflecting the concerns of most Chileans over a range of issues related directly or indirectly to inequality. In general, Chileans view their society as highly unequal across many dimensions. There is broad acceptance of principles aligned with the concept of "equality of opportunity" in the sense that Chilean citizens believe that greater effort, or talent, should be rewarded. However, there is profound disagreement that this is the case in Chile. The view that opportunity is highly unequally distributed is strikingly widespread across social classes, age groups and education levels. The extraordinary series of protests in the 2006 to 2019 period were consistent with public views and perceptions across most groups, whether in concerns over lack of quality in education, over collusion in business practices, lack of fairness in social provisioning in pensions, differences between genders, even while some groups opposed street protests as a form of political action.

These citizen perspectives can be compared with detailed work on patterns of income and wealth inequality. Chile has always been unequal, as long as data is available, along with most Latin American countries. In the first decade after the military coup, measures of income inequality show a significant further rise. Since 1990, alternative measures have diverged. The core official household survey (CASEN), has found a significant decline in measured income (and expenditure) inequality, from very high to "only" high levels, with mild redistribution to poorer and middle groups. On this measure, all groups gained from overall growth, but poorer groups gained more. However, this survey excludes important parts of the income distribution, especially top incomes and major parts of capital income. Measures that seek to account for these sources of income find both higher overall inequality in income, and at most only very muted changes over time since 1990. Wealth is much more imperfectly measured, but the indicators that do exist suggest substantially higher inequality of wealth than income.

In this second part of the analysis we further explore the forces behind the persistence of high inequality and the pervasive perceptions of lack of fairness in the system.

The 1970s authoritarian transition was, amongst other things, a resolution, of a particular kind, of distributional and ideological conflict. In terms of policy, this has often been characterized as a transition to a "neoliberal" approach, in the sense of external opening, internal reliance on markets and pro-business policies. This was supported by institutional changes, both via force (notably repression of unions) and more technocratic processes (for example in revised legislation and policies on labor and privatization). This was complemented by a series of innovations in social provisioning, that involved a mix of increased targeting, greater linkage of benefits to individual contributions and increased use of the private sector in provisioning.

This policy transition was not unique to Chile in this period. As argued by historian Gary Gerstle, the United States experienced a parallel transition from the New Deal policies that emerged in the 1930s to a "neoliberal order" marked by President Reagan's coming to power in 1980, with similar developments in the UK under Margaret Thatcher and many other countries (Gerstle, 2022). As in Chile, this transition emphasized reduced state involvement, less regulation of business, and greater reliance on markets. It also shaped core development thinking in the advice and practice of global institutions such as the IMF and the World Bank. In many areas Chile was a leader in policy design, for example on private involvement in infrastructure and pension reform.

In Gerstle's argument this "neoliberal order" was sustained in the US through transitions to presidencies from the Democratic Party (Clinton and Obama). In this respect Chile followed a similar path, with significant continuity in overall policies after the democratic transition, that continued to be "pro-market and pro-business", only now with significant expansion in social provisioning. Then in many parts of the world there was the beginning of an unravelling of this "neoliberal order", especially after the 2007 financial crisis. This occurred in the context of generalized discontent, both from the "Left" (in the US notably by candidate Bernie Sanders), and the populist right (in the Tea Party, and then channeled by President Trump). Chile's extraordinary sequence of protests echo this, as well as the substantial polarization. The term "neoliberal" is used and misused to mean many things, but the idea of significant shifts in thinking and broad policy approaches is useful to the interpretation of the present conjuncture.

The core of this paper explores the persistence of inequality through these major transitions. As in the first part, it takes a broad view of inequality, to include income, wealth, access to services, power, social status and dignity. In organizing the analysis we extend a framing from Blanchard and Rodrik (2021) that proposes structuring an assessment of inequality in terms of two dimensions: first, across the main groups in an overall distribution (of income, social status, etc), between the poor/lower classes, middle classes, and elite groups; and second, across domains of influence on outcomes over the life cycle, between "pre-production", incomes from work and capital, and post-production.

We start with a review of the experience on poverty across all of these domains. With respect to *absolute income poverty*, Chile has experienced stunning success. This was importantly due to state action, as opposed to solely due to trickle-down from "neoliberal" policies. There was growth in labor incomes of the poor, but this was actually *less* than for non-poor groups. What made the difference was an array of transfers, including family allowance, family subsidies and the social pension. Progress on other dimensions of well-being—as captured, for example, in the multi-dimensional poverty index—has been less dramatic, often reflecting weaknesses in social provisioning, that also affect the lower middle classes.

We then turn to "pre-production" through the prism of different forms of capital—economic, human, social and cultural capital. This emerges as a core part of the story of entrenched inequalities. Both perceptions and realities underscore the advantages of wealth in access to quality education and health, while inheritance taxes are very low by OECD standards. There has indeed been a major expansion of the education system, especially at higher levels. This is often seen as *the* route to greater equity . However, in practice this has been a source of the *reproduction* of inequalities, notably via the school choice system, low and unequal quality of education, and differential graduation rates across socioeconomic groups. There have been significant reforms, especially under the 2015 law, but it is too early to assess effects. We also argue that social networks and other cultural factors do work in perpetuating inequalities within the system, echoing valuable work by the UNDP in the DESIGUALES report (Frei et al, 2017).

We next review how incomes are created and distributed through earnings from capital and labor. Chile has an unusually high share of capital income, that is also reflected in the importance of undistributed profits in adjusted measures of Chilean inequality in the World Inequality Database. This is associated with high levels of concentration of ownership and market shares in the business sector. An important part of this flows from the history of the 1970s and 1980s, in which policies led to the consolidation of established business families and the creation of new business elites. These then had the power of incumbency in the post-1990 period to maintain their position in terms of ownership of capital and business profits. Some of this is shared with high levels of salaries or wages in large firms. These features were echoed both in protests over collusion, and perceptions of "unfairly high" levels of CEO remuneration discussed in Lecaros et al, 2023). Labor income is generally unequally distributed. This is partly linked to returns to education, but also to differences in labor income between large firms and the many small scale firms, actual informality, and a high fraction of temporary work. Unions have limited coverage (though they raise wages where they have high presence), while minimum wages have had a significant impact, both for formal and informal workers.

With respect to "post-production" we focus on provisioning to manage risks, especially of health income insecurity in old age and unemployment. Risk management is tightly linked to individual resources, whether through the largely individual financed unemployment system, the defined contribution pension, or the option of opting out of the public health system and purchasing insurance in the private system. There are quite good designs for individuals and households with greater wealth, but low quality for middle and poorer groups. In particular, everyone is in principle entitled to health services through the public system—that is now without co-payment for poor households—but there are major issues of quality and long waiting times. A tax-financed basic social pension is available to all in need. By contrast, unemployment does not have any provisioning outside the formal system. Overall, the system does provide some protection from destitution associated with risks, but it again becomes a source of the consolidation and reproduction of inequalities.

We conclude with an overall reflection. In Chile, market- and business-oriented policies, often associated with a "neoliberal" model, were consistent with significant growth for a while and was part of the decline in absolute income poverty. Growth was not, however, consistent with greater equality in outcomes, nor with greater equity, in the sense of greater equality of opportunity, social standing, and relational interactions. This is for a fundamental reason, albeit one that operated through multiple mechanisms. A pervasive process was the following: both the pro-market/pro-business orientation and the varieties of innovations in social provisioning interacted with entrenched structural inequalities. This led to the continued concentration of benefits from markets (and growth) and the reproduction of inequalities both over time and across generations. Market-oriented policy and institutional designs interacted with both the structure of ownership of human and economic wealth and patterns of socio-cultural inequalities associated with histories of social networks and cultural difference. These processes are to a large extent self-reinforcing. This is why we characterize Chile as being in an "inequality trap".

So why was social action so explosive in Chile? Here we suggest an important part of the story is that of disappointed expectations. These were sharpened by the very successes of the past, since they emerged in the context of growing aspirations of an expanding middle class, magnified by the joint effects of democratic opening and the initial years of growth in incomes and social provisioning, especially in education. These aspirations faced the persistence of vivid, large, unjustified inequalities associated with elite privilege, and a set of other issues around perceived lack of fairness and how people are treated, *maltrato*—the subtle or unsubtle humiliations experienced in interactions with parts of the state and elites. An important finding from the perception data in the first part of this project is that all groups have high levels of aspirations for their children. This is likely to be good for individual effort and dynamism, but only sharpens any disappointment or sense of betrayal. This constituted the base from which grew the series of social outbursts and attitudes analyzed in the first part of our work.

Is there scope for concerted action to tackle extreme inequality? One, but only one, part of this concerns the role of the state. We reviewed evidence on the size of the Chilean state, using the proxy of tax effort: Chile is close to the predicted average for its income level, *but* has substantial potential for increased taxes relative to OECD norms, especially in light of the high capacity of the Chilean state in international context. Chile also has strikingly low redistribution by the state compared with other OECD countries. There is significant scope for a somewhat larger role for the state–and potential to raise taxes in ways that are both equitable and reasonably efficient.

This paper is not the place for detailed policy analysis and design. Rather it develops the case that action to tackle entrenched inequalities is fundamental to Chile's long-term development. Given the nature of these inequalities, there is no panacea for policy. Favorite domains for action—more education, progressive taxation, poverty-focused transfers—have a role to play, but need to be part of a comprehensive, and multi-faceted approach, that includes reforms to many parts of the social provisioning system, the functioning of the state, inefficiencies within a concentrated business sector and, especially, the creation of economic opportunities for decent jobs, associated with broad-based access to all levels of entrepreneurship. In some cases, reducing inequalities, including unjustified inequalities on ethical grounds, can involve costs, for example in the efficiency costs of increased taxation for redistribution and expanded services. This needs to be assessed and be part of any public debate. However, in many of the areas reviewed in our diagnosis, good designs to reduce inequality can be aligned with *greater* efficiency and *higher* growth--even if some groups lose special advantages. This applies, notably in reducing inequalities in the quality of education provision, in market concentration and collusion in the business sector, and in inefficiencies in social protection and other influences on informality.

1. Diagnosing the persistence of excessive inequalities

In the first part of this project we found that Chilean citizens express widespread, profound concerns over many aspects of inequality. These not only relate to income and wealth—though that is undoubtedly a concern—but also over a range of other dimensions, including education, health, pensions, the justice system and discrimination in treatment, whether from higher class Chileans or government actors. These are systematically cast in terms of lack of fairness, or the injustice of unequal access or outcomes unjustified by differences in effort or talent.

We also reviewed quantitative analysis of patterns over time, with an especial focus on existing careful work on incomes and wealth. These support the view that Chile has remained a society with extreme inequalities since the democratic transition, albeit with some differences in findings on whether there has been some reduction or none, depending on the source.

This paper now seeks to diagnose why there has been such persistence of high levels of inequality after the democratic transition. It in particular explores the interactions between policies and institutional designs and existing unequal structures of incomes or wealth, power and social position. We also explore why this should be a source of concern, not only for intrinsic reasons, but also for the influence of inequalities on efficiency and overall growth and development.

To provide some structure to this diagnosis, we use and extend a simple organizing framework for analyzing policy proposed by Oliver Blanchard and Dani Rodrik (2021). This is organized in terms of two dimensions: first, by the *segment of the distribution*, between the poor, the middle and the elite; and second, in relation to *phase of the life cycle* of individuals or groups, that is whether policies and processes relate to pre-production, production and post-production. Table 1, adapted from Blanchard and Rodrik, illustrates. Note that we use "capital" in the broad sociological sense, to include social and cultural capital, as well as human, financial and physical capital.

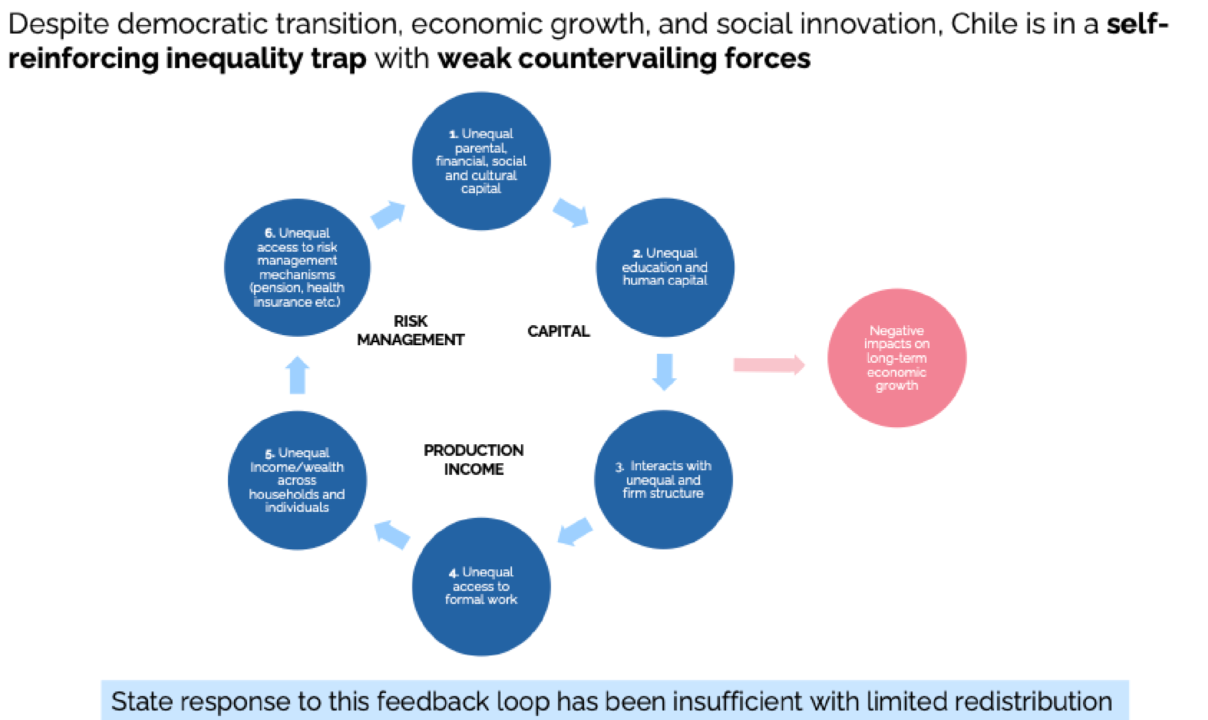
Table 1. Domains of focus and action to tackle inequalities

	Pre-production	Production	Post-production
Lower classes/poor groups	Quality basic education, health services for children	Labor income, minimum wages	Family transfers, social pensions, management of health risks
Middle classes	Parental capital, basic and higher education	Drivers of job growth, job regulations	Risk management for unemployment, pension and health system design, taxation of labor incomes
Elites	Parental capital, access to elite education	Labor and capital income and taxation	Risk management, taxation of labor and capital incomes

Source: Adapted from Blanchard and Rodrik (2021)

Within this structure we are concerned with a central hypothesis, that Chile is caught in a form of "inequality trap", in the sense that the multiple processes in the economy and society support reinforcing patterns that sustain the high level of (multi-dimensional) inequality. Moreover, these reinforcing processes have not, significantly and on balance, been offset by the large economic and policy changes since the democratic transition. This is visualized in Figure 1.

Figure 1. Chile is trapped in high levels of inequality



Source: Authors

Should we care about Chile being stuck in this inequality trap? One reason for caring is that large majorities of Chilean say they consider the current socio-economic system to be unfair in many ways—this was the central theme of the first paper. This is aligned with strong ethical reasons for being concerned with many dimensions of inequality, that we share. There are, of course, other things to care about, not least the *levels* of welfare across the distribution, that is greatly affected by the pattern of inequality in the system.

A narrower ethical position is that when thinking about inequality we should really only be concerned with absolute poverty (in income and other spaces). Greater inequality is justified to the extent that this leads to reductions in absolute deprivations.[2] A related economic policy perspective is that a society should only maximize growth, on the grounds that "a rising tide lifts all boats" and the benefits trickle down to the poor. In thinking about and assessing forms and drivers of inequality, we need to explore the relationship with aggregate growth, and the expansion of the level of income and well-being of poorer groups.

[2] This is a simple formulation of Rawls "maximin" principle, that a society should maximize the welfare of the poorest.

While our core ethical perspective is based on the broader concern with fairness, we start with an integrated view of the experience of the bottom segment of the distribution—that is the top row in the table. This explores progress on both absolute income poverty and other dimensions of deprivation. We then select key areas in three domains of potential action– the columns of the matrix. Here we have a particular interest in issues affecting the middle classes and elites: in pre-production we focus on the reproduction of capital, through education and other mechanisms; in production, the firm sector, informality and the labor market; and in post-production risk management. In each area, we pose the question of whether observed inequalities tend to increase or reduce aggregate growth. This analysis then turns to a commentary on "What can be done?", with an outline of strategic considerations on the role of the state in relation to overall growth and development change.

2. Progress on absolute poverty

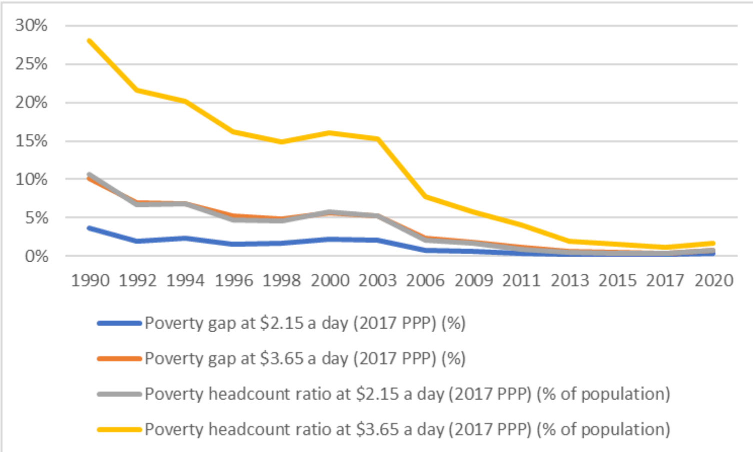
This section provides a summary of the overall story on absolute poverty reduction. We argue that there have indeed been dramatic reductions in absolute income/expenditure poverty, and growth has been a direct and indirect source of this, via its contribution to state transfer programs. However, despite the major increase in aggregate income, there has been less progress in non-income measures of deprivation. Moreover, what is meant by poverty itself rises with aggregate societal welfare, and Chile should increasingly be aspiring to reducing poverty in relation to the benchmark of other, richer, OECD societies.

There have been dramatic declines in measures of absolute income poverty

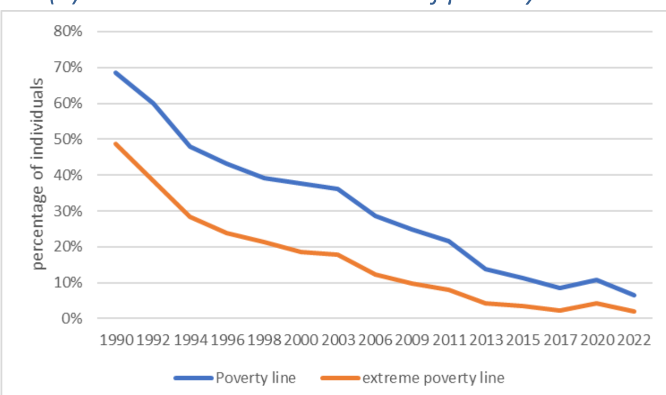
Figure 2 shows the remarkable, East Asian-style, reduction in a measure of absolute income or expenditure poverty. This is calculated in relation to normative assessments of the required income or expenditure per capita that a household needs to meet a specified standard of living (the "poverty line"). The figures shows the proportion of the population below this line (other measures take account of the depth of poverty). We use both "international" and Chilean measures. Poverty lines are always a product of societal and political assessment of basic needs, and the official Chilean lines are somewhat higher than the international lines used by the World Bank for cross-country comparisons. There is a dramatic decline for the international measure of US3.20 per day per person (at Purchasing Power Parity) for middle income countries. This experienced a fall from almost 30% of the population in 1990 to virtually zero in 2020. Large declines also occurred for a more restrictive poverty line, and measures of the "poverty gap" (a measure of the mean distance of the income of the poor from the poverty line). A similar pattern is shown using Chile's most recent poverty lines, for which there was a decline from almost half the population living in "extreme poverty" in 1990 to 2% in 2020, and from almost 70% to 7% living in moderate poverty over the same period. There was then a rise in the COVID-19 affected year of 2020, followed by a further fall in 2022.

Figure 2. There has been a dramatic reduction in the rate of absolute income/expenditure poverty

(a) On international measures of poverty



(b) Chilean national measures of poverty

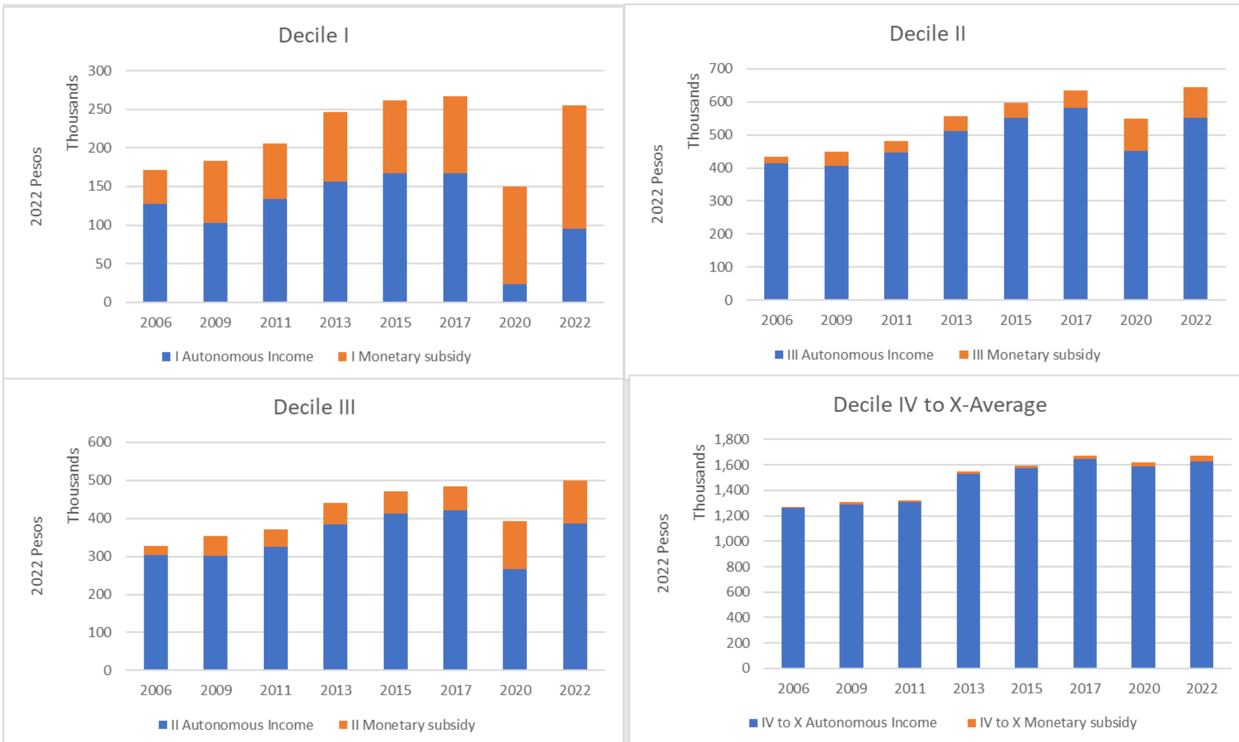


Source: WDI (top) Ministerio de Desarrollo Social 2020 (bottom)

What drove this decline in absolute poverty? In background work for this paper we first looked at the1990 to 2017 period, before the 2019-20 COVID disruptions. For this period there were large increases in *labor* income (the main source of income for poor and middle groups) from the third decile up, somewhat less for the second decile and much less for the poorest decile. A similar pattern is found if other "autonomous" income is included (this includes rents, dividends). The relatively weak growth of the poorest groups is more than compensated by the much larger, and strongly progressive, growth in transfers or monetary subsidies to poorer households (*Ministerio de Desarrollo Social* ,2020).

Figure 3 complements the long-term view for a shorter time period, using the latest CASEN data. This presents the level of average income, in constant prices, for different deciles. Between 2006 and 2013 income for the bottom 30% grew faster than for the top 70% of the distribution but this was largely due to a major role for transfers from the state.

Figure 3. Pre-COVID-19 all groups experienced income increases, but the poorest depended much more on transfers



Source: Authors' calculations from CASEN

Overall, with respect to monetary incomes, this shows the benefits of aggregate growth in bringing direct income benefits throughout the distribution—with "trickle-down" of direct incomes reaching all groups, but was relatively weak for labor income of the poorest. State action made a significant contribution to the reduction of absolute income/expenditure poverty, especially for the poorest, with an indirect effect from growth in supporting the expansion of state revenues. These transfers occurred through a range of specific programs, that we discuss next.

Transfer programs make a difference to beneficiaries but with substantial exclusions

The aggregate evidence indicates that transfers played a large role in reducing absolute income poverty. But this is a statement on average effects, and says little about the efficiency of transfers, their broader influence on behaviors, and the nature of the relationship between the state and recipients. In the first paper (Lecaros et al, 2023), large majorities of Chilean citizens, including the poor, had low trust in the state, and complained of humiliating treatment by parts of the state. A theme in public commentary is of the opaqueness or the absence of the state—at least in some parts of Chile.[3] Recent international evidence suggests that "psychological frictions" play a significant role in certain contexts where potential beneficiaries face extended business hours and require substantial time and assistance to

[3] We are indebted to Andrea Repetto and Juan Cristobal Romero for these observations.

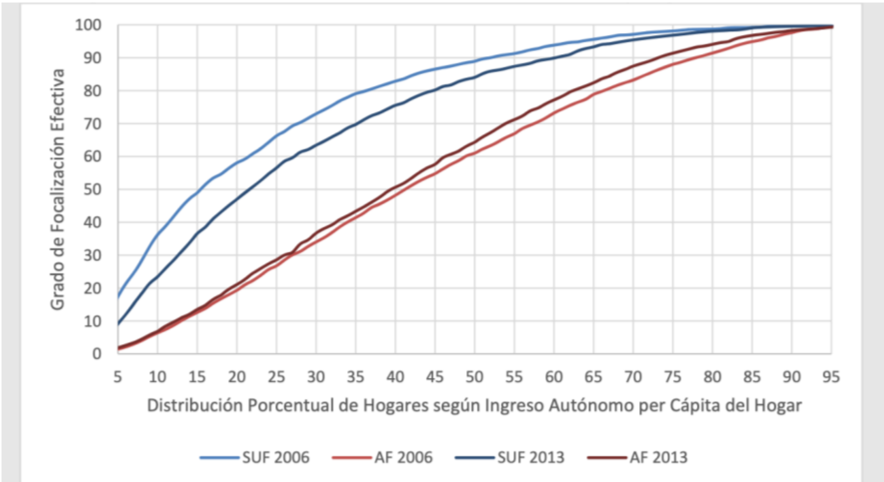
complete applications (Bhargava and Manoli, 2015). The transactions costs of engaging with the state has been recognized in Chile, with the formation of in-person and digital one-stop offices in 2012, known as *ChileAtiende*, designed to guide individuals through the applications for a large number of state transactions. In 2016 there were over 200 such offices, and these were processing 231(!) different types of transaction from 29 state organizations. While there is not direct evidence of effectiveness in Chile, in a parallel case Deshpande and Li (2019) observed that the closure of similar offices in the United States resulted in a 16 percent reduction in disability benefit recipients.

We review here some data on three programs, that are designed to reach relatively poor groups, to provide some insights into the issues. We first illustrate with two programs aimed at low income families. The family allowance, *asignación familiar*, or AF, was one of the first initiatives implemented in Chile and was directed toward families of workers in the poorest deciles. Today 14 out of 17 countries in the region have at least one type of transfer of this type, that is associated with employment (Tromben y Podestá, 2019). The family subsidy, *subsidio familiar*, or SUF, is a form of conditional cash transfer, that swept through the Latin American region in the wake of innovations in Mexico and Brazil in the second half of the 1990s. It is targeted to low income families that are not working in the formal sector, with conditionality including complying with behaviors on education attendance and health objectives.

The family allowance (AF) is a transfer that depends on a worker having eligible dependent family members and his or her income bracket. It seeks to both improve economic well being of poorer households while also encouraging formal employment and labor hours. Workers are paid by the employer and "*cajas de compensación*" work as intermediaries. By contrast, the family subsidy (SUF) focuses specifically on children from families of extreme poverty and is not associated with working status. Its targeting method mainly depends on administrative data, from the government's proxy means test, "*ficha de protección social*". This is a proxy for a household's income and wealth, with an intention to focus on the bottom 40% of the population. It is also formally conditional on education and health practices, but compliance is not reported to be rigorously applied.

In terms of targeting, Figure 4 shows that the family subsidy (SUF) is substantially more progressive, i.e. does a better job at targeting low income families, than the family allowance (AF), that is only mildly progressive, in both 2006 and 2013. Both are dramatically more progressive than the highly unequal distribution of income. As a consequence, amongst beneficiaries the family subsidy reduced moderate poverty by 3.6 percentage points, from 22.4% without to 18.8% with the subsidy, in 2013; the family allowance reduced moderate poverty by 1.0 percentage points, from 8.4% to 7.4% in the same year.

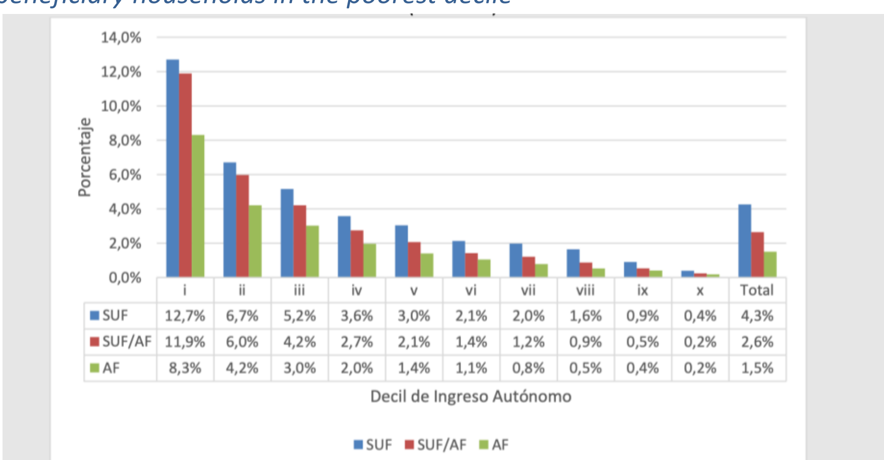
Figure 4. The family subsidy is highly progressive and the family allowance moderately so



Source: Cooper et. al (2016) using Casen household survey for 2006 and 2013

Cooper et. al (2016) also estimate inclusion and exclusion errors in these social programs. As Figure 5 illustrates, the biggest impact is clearly in the bottom decile, and to a lesser extent the next two deciles, but there are some beneficiary households throughout the distribution. Of equal interest here are quite substantial exclusion errors: both schemes exclude some 30% of households with children under 18 that should be eligible for the programs. While these rates of exclusion were not out of line with similar programs in the region, and may be due to many factors, they are indicative of the challenges of engaging with the state.

Figure 5. The family subsidy (SUF) represents 13% and the family allowance (AF) 8% of income of beneficiary households in the poorest decile

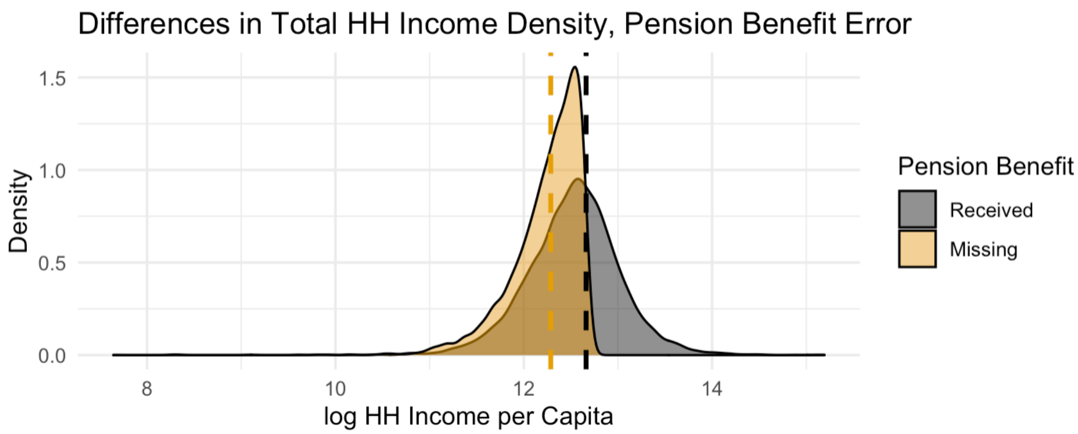


Note: These are averages for beneficiary households, SUF/AF is the average of households who receive one of the others.

Source: Cooper et. al (2016) using Casen household survey for 2006 and 2013

While we don't have updated information on these programs, we undertook analysis of 2020 data for our third program, the social pension, for this paper. [The current government reports](#) that some 98 to 140 thousand people were eligible for guaranteed pensions but did not claim the benefits. Using the 2020 CASEN database we can see the extent and real effects of these exclusions. As Figure 6 shows, there is a significant gap in household per-capita income for families that have received pension benefits, versus families who by all observable measures, should be receiving them but are not.[4] Average total income of "missing" benefit recipients is significantly lower at over $100 USD, so they are not making it up through other sources.[5] Personal labor income is higher in the missing group than for those who receive pension benefits by around $40 USD, a this group is both more likely to work at all and to work more hours.[6]

Figure 6. Households excluded from the social pension tend to have lower incomes



Source: Authors estimates from CASEN 2020

What are some of the characteristics of those who are not claiming benefits? These families are more likely to be located in urban centers, live in apartments or "semi-detached" houses, and have larger households with fewer rooms, or overcrowded houses. They also seem to have a weaker relationship with the state, since even though they are demonstrably poorer, they are less likely to receive a number of different, non-pension related benefits. This brief descriptive evidence shows that exclusion is still a challenge for some recent reforms such as the pension benefits. ChileAtiende and the system as a whole should be further analyzed to minimize the extent to which the application process is leaving vulnerable and eligible population outside, including the assessment of behavioral frictions and how they interact with socio-economic characteristics.

Non-income measures of deprivation show less progress

The striking progress on absolute income poverty was not fully reflected in measures of multidimensional poverty. These measures flow from a different tradition that seeks to capture the multiple dimensions of living, as developed in Amartya Sen's capabilities approach. These can be analyzed as a dashboard, or brought together in an index. For poverty measurement this involves assessing society-specific cutoffs on whether a household, or individual, is judged to be deprived with respect to each dimension. These can then be aggregated into an index, usually with a simple weighting scheme. There is a choice on how many deprivations a household, or individual, needs to suffer to "count" as being poor.

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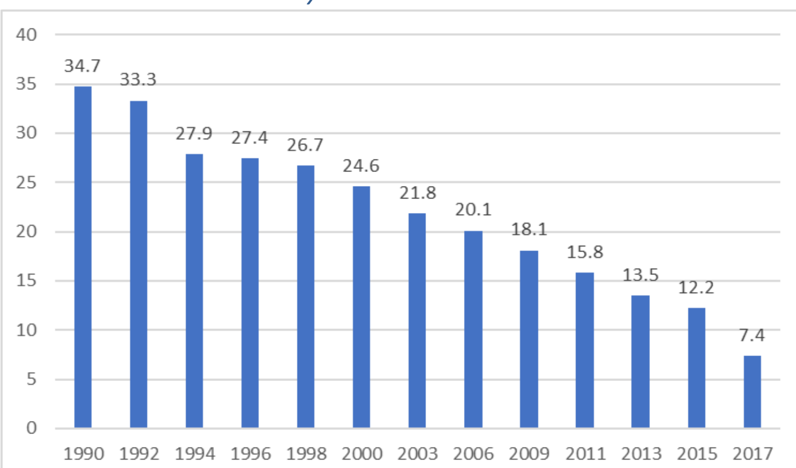
[4] We use the 2020 data set before the roll out of the new *Pensión Garantizada Universal* in 2022. We are combining the minimum pension guarantee, *Pensión Básica Solidaria (PBS)* and a top-up, *Aporte Pensión Solidario (APS)*.
[5] This would move a household from the 3rd to the 5th decile.
[6] Note that not working is not a requirement to receive either benefit.

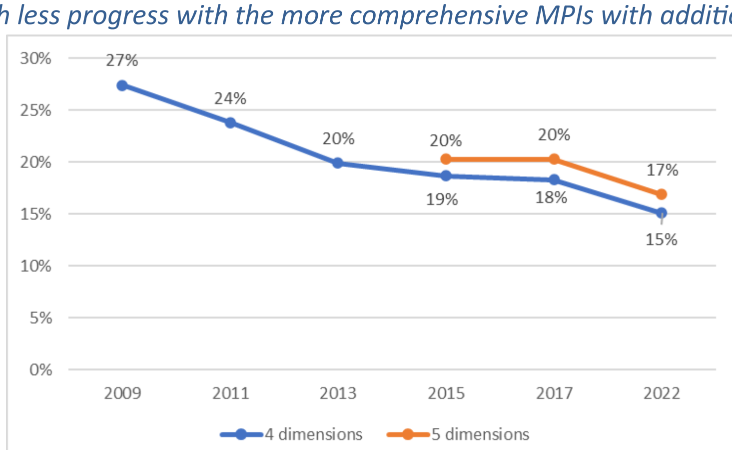
(Each step has a somewhat arbitrary element, but this is no more arbitrary than for an income poverty line. See Alkire and Foster, 2011.)

Chile has developed a series of multi-dimensional poverty lines (MPI). From 2009-2017 the index included four dimensions: education, health, labor and social security, and dwelling. Each dimension is composed of various indicators that proxy deprivations within the dimension. In 2013, a new dimension was included, "networks and social cohesion". Figure 7 shows the evolution of the two aggregate indexes. While the lack of data does not allow construction of the MPI for years prior to 2009, an alternative measure can be calculated to assess the evolution of a closely comparable indicator since 1990. This measure uses the indicators that can be constructed uniformly since 1990, and then identifies the share of households experiencing three deprivations (Ministerio de Desarrollo Social 2020).

Figure 7. There have been substantial declines in households experiencing deprivation in three dimensions simultaneously



But with less progress with the more comprehensive MPIs with additional dimensions

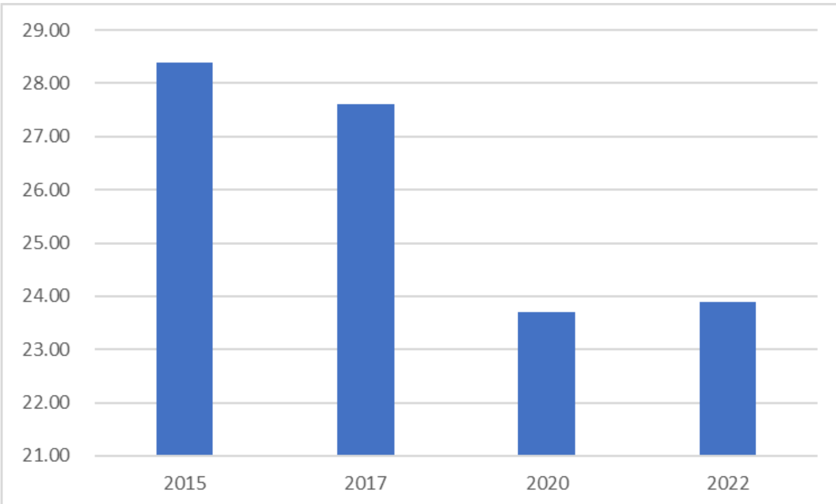


Source: Ministerio de Desarrollo Social 2020 and 2022

What is going on here? Looking into the trends of the five dimensions of the MPI, we can observe a pattern of continued deprivation in several of the individual dimensions. Long term trends into educational completion show significant improvements since 1990 (Ministerio de Desarrollo Social,2020). However, still about 1 out of 4 Chileans are deprived in this dimension.

Despite the improvement trend, COVID-19 caused a loss of momentum in the improvement of educational completion and the indicator has stagnated between 2020 and 2022 (Figure 8).

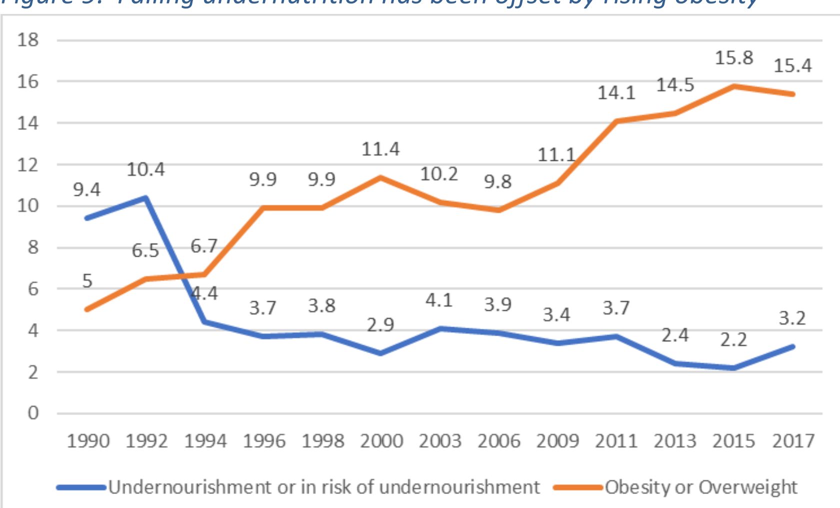
Figure 8. 18 percent of individuals were still deprived with respect to the societal/legal minimum for education by 2017



Source: Ministerio de Desarrollo Social 2022

With respect to health, there is also a mixed picture on malnutrition, with low levels of undernutrition since 1994, but rising levels of childhood obesity that is correlated with lower incomes (Figure 9). With respect to health access, almost all households are enrolled in one of the major schemes, with low income households almost exclusively in the public scheme (FONASA). Again, extreme deprivation has been largely taken care of, but as we discuss below, there are major concerns over the quality of care.

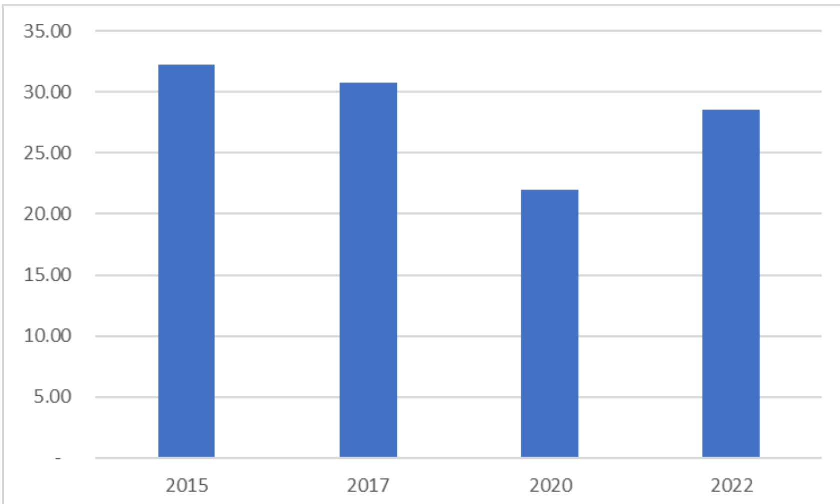
Figure 9. Falling undernutrition has been offset by rising obesity



Source: Ministerio de Desarrollo Social 2020

Within the dimension of labor and social security, most striking is the very slow downward trend shown by the measure of households with deprivations with respect to social security. This indicator measures the share of individuals that are neither contributing to the pension system nor self employed with completed superior education (a proxy for wealthier individuals who can manage their own income security). In 1990 a third of individuals were deprived in this sense, and this was still 29% of in 2022 (see figure 10).

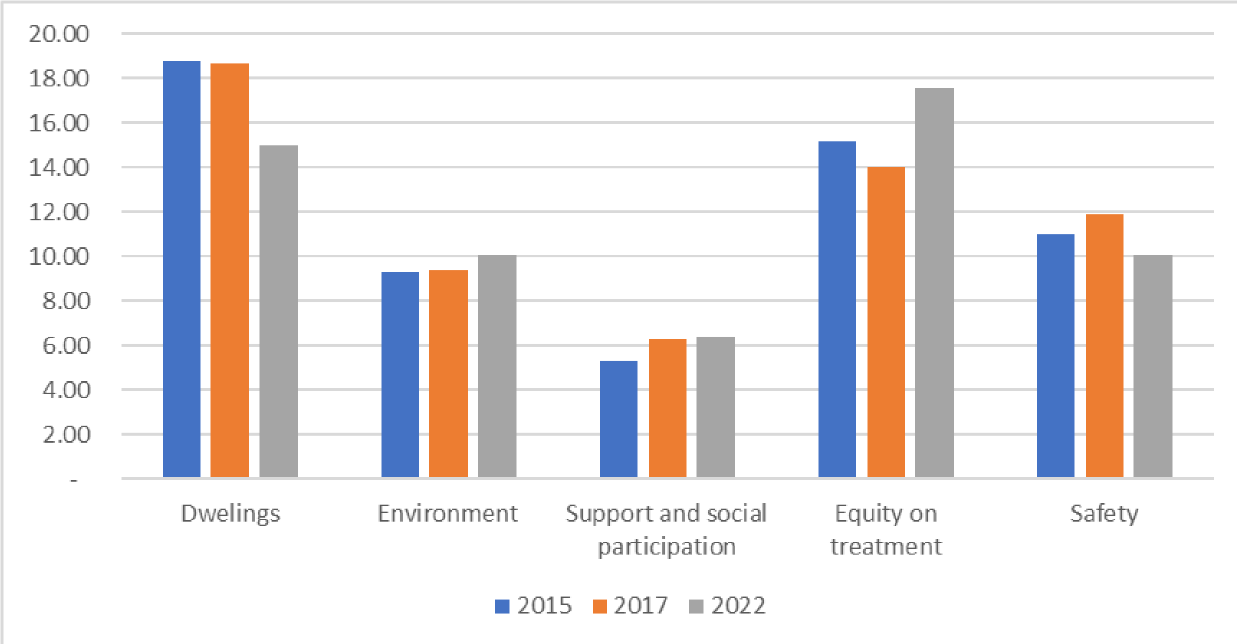
Figure 10. There has been very slow progress in deprivations with respect to social security



Source: Ministerio de Desarrollo Social 2020

Beyond measures of education, health and social security, there are several other dimensions of well-being and deprivation. The most recent methodology for the multidimensional poverty index in Chile incorporated a set of indicators that reflect deprivations related to social networks and social cohesion, the physical environment, safety and "treatment" by others (e.g. be elites, or state actors—see discussion in the first paper). In 2022, 15% of individuals live in households with precarious dwellings, 10% live in areas with drug selling or shooting or are exposed to unsafe environmental conditions such as air, sewers and water pollution and trash accumulation. In 2022, 18% of Chileans experienced deprivation under the equity on treatment indicator that captures discrimination due to various reasons (Ministerio de Desarrollo Social,2022). Figure 11 summarize the reported results for 2015-2022.

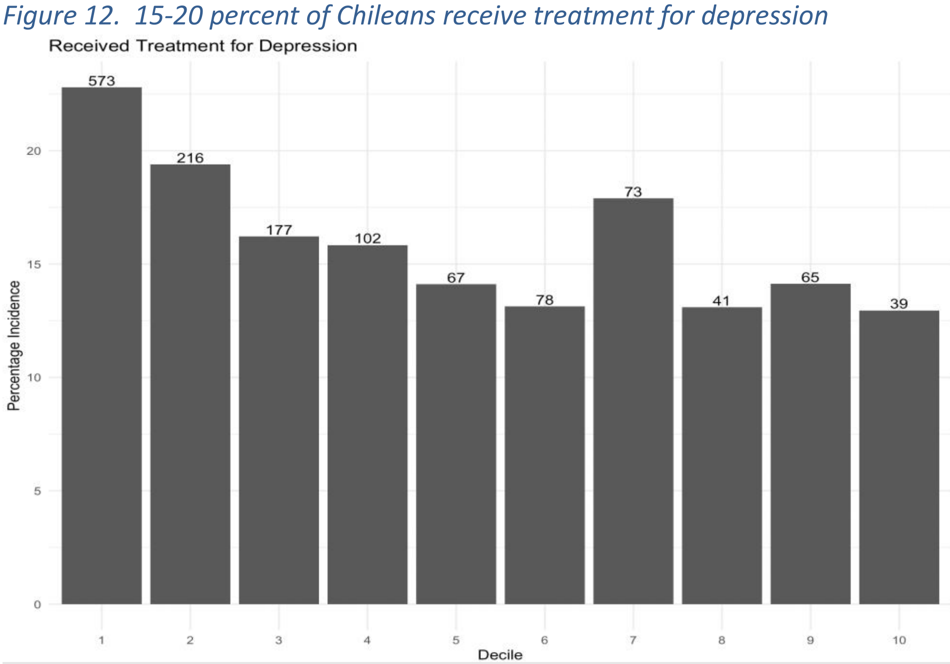
Figure 11. A significant minority of Chileans experience deprivations of their environment and treatment



Source: Ministerio de Desarrollo Social 2022

Finally, there are some direct measures of psychological well-being. Figure 12 shows data on depression, using a question on whether an individual actually received treatment. As Figure12 shows, this is significant throughout the income distribution and is regressive, ranging from less than 15% for the top half of the distribution to over 20% for the bottom decile.

Figure 12. 15-20 percent of Chileans receive treatment for depression



Source: Authors calculations

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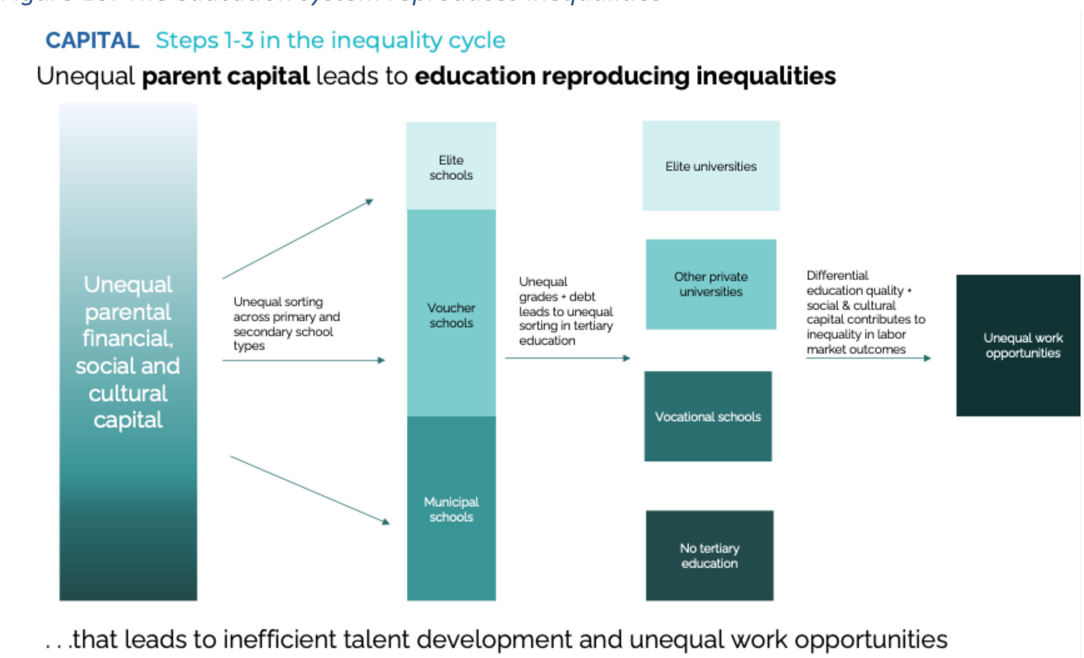
Economic growth plus pro-poor government transfers had a dramatic effect on income poverty, but many gaps remain in non-income dimensions, including environmental, community and psychological factors, and treatment by others, as in Adam Smith's famous characterization, "the capacity to go about without shame". Many of these intersect with concerns of the middle classes, and were voiced in the sequences of the protests through 2019. Even with respect to income poverty, what is considered deprived with respect to material well-being rises with aggregate or average income in society, since this shapes expectations. In most European countries poverty is actually defined in relation to the distance from average income. This takes us to a more direct assessment of drivers of overall inequalities.

3. The reproduction of inequality and forms of capital

In this section we explore a central feature of "pre-production" processes, the reproduction of inequalities across generations through the transmission of various forms of capital, including economic capital (human and financial), the social capital embodied in network connections, and cultural capital (Bourdieu, 2018). The overall story is one of the reproduction of inequality, with the education system being a central locus for this. Figure 13 provides a visualization of this story.

Figure 13. The education system reproduces inequalities

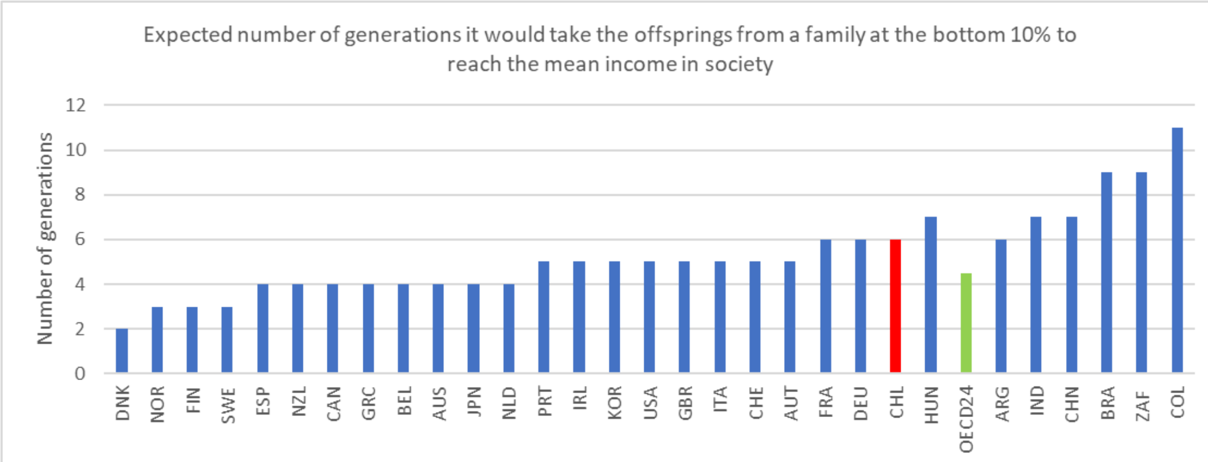


Source: Authors

The role of parental economic capital

The economic wealth of parents has a powerful influence on the economic position of their children. One measure of this is provided by the extent to which a child's income is correlated with their parents. Figure 14, calculated by the OECD, presents a specific prism on this–the number of generations it would take for a family's offspring to rise from the bottom 10% to the mean income of a society. Based on this correlation, this would take six generations for Chile, compared with the OECD average of "only" four. (Highly unequal societies, such as Brazil and South Africa, have even lower mobility.)

Figure 14. Social mobility for the poor is low in Chile…though not as bad as some other unequal societies

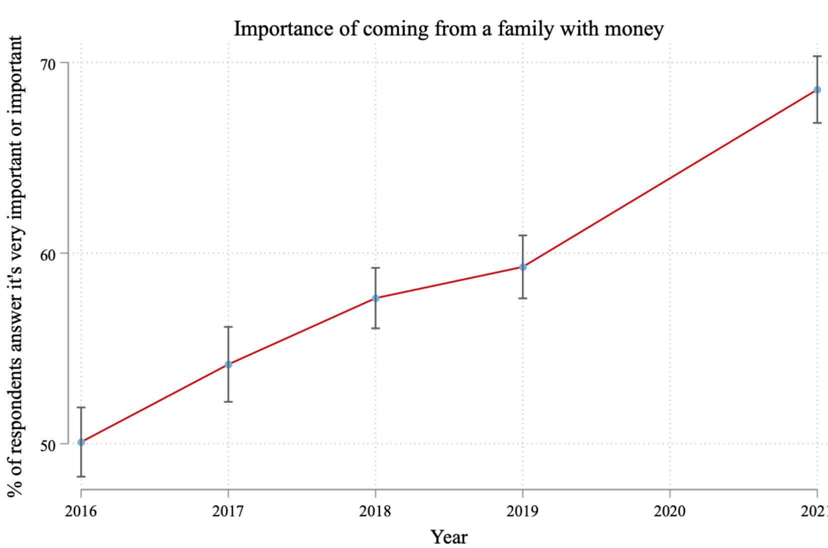


These estimates are based on earnings persistence (elasticities) between fathers and sons and the current level of household income of the bottom decile and the mean income , assuming constant elasticities. Source: OECD 2018

For Chile, empirical work by Meneses (2022 and n.d) further explores the role of social class and educational trajectories influence on labor market experiences, as well as the role of educational access in improving mobility. As discussed below, parental socio-economic status has a strong correlation with educational performance of children.

Chileans care about the influence of parental income on opportunities. This is seen in the rising proportion of citizens who agree with the statement "it is important to come from a family with money" (Figure 15) and the very large majorities, from all social classes, who consider it unfair that high income people can get better education than low income families.

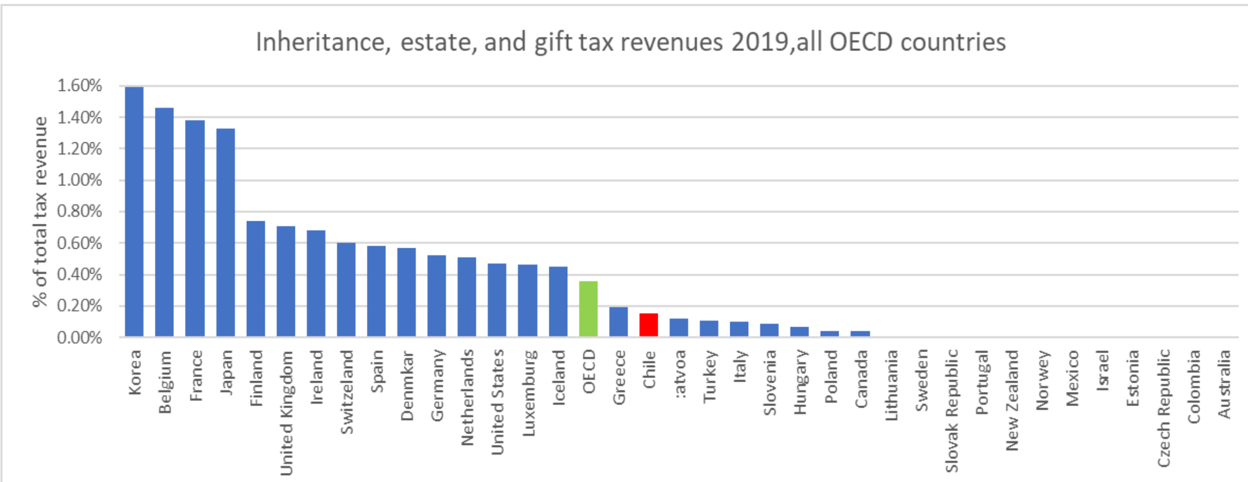
Figure 15. A substantial and rising majority of Chileans think it is important to come from a family with money



Source: Authors calculations from ELSOC

As suggested by these perceptions, and discussed in Part 1, Chileans have particular concerns over the advantageous position of elites. A potential mechanism for moderating the transmission of wealth across generations is inheritance, or estate taxation. This is very low in Chile, significantly below the OECD average, or indeed of the United States (Figure 16). Inheritance taxes are often controversial. However, there is evidence from US studies that people increase their support for estate taxes when given information on the inequalities of wealth and the small number of descendents (1 in a 1000) that pay any estate taxes (Kuziemko et al. 2015). There is also support for much higher rates of taxation of wealth if this is from inherited rather than earned sources (Fisman et al. 2020).

Figure 16. Chile's inheritance taxes are unusually low by OECD standards

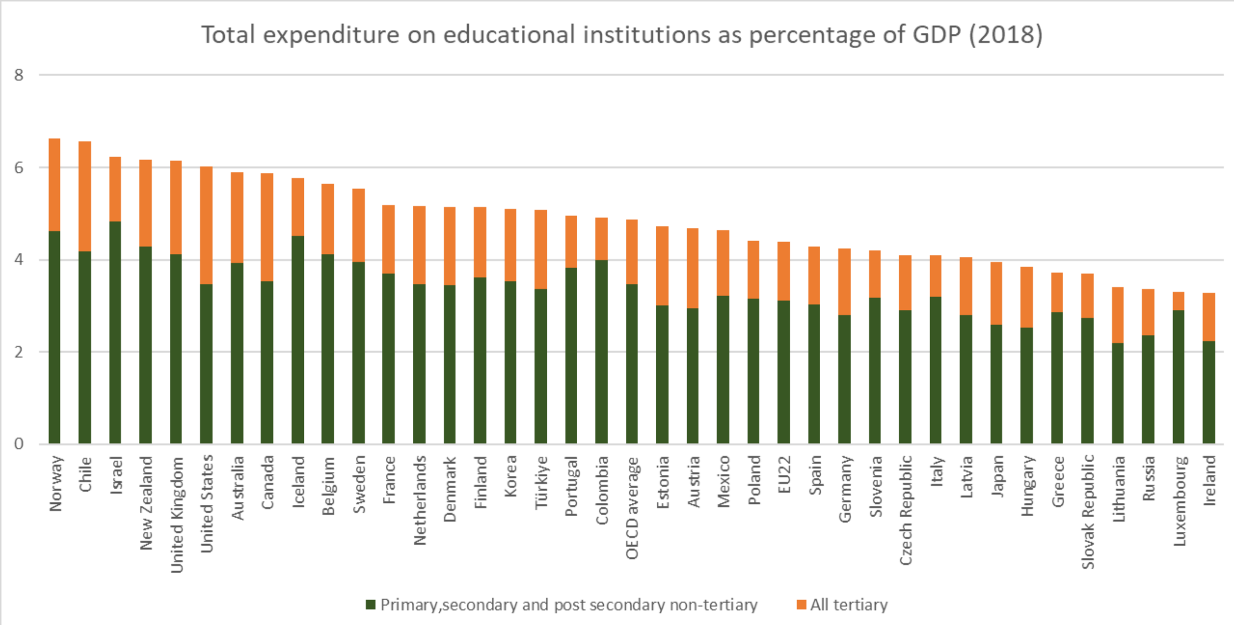


Source: OECD https://www.oecd.org/tax/tax-policy/inheritance-taxation-in-oecd-countries-e2879a7d-en.htm

Human capital formation and the education system

We now turn to education. The expansion of access to education is often seen as a primary route both to greater equality of opportunity and to individual and societal productivity. Chile was an early innovator in education design, and from 1980 introduced a sequence of education reforms, notably a form of vouchers for private schools, followed by a substantial expansion of all levels of schooling since 1990, including a major expansion in private universities. By 2019 net enrollment rates of children were 78% for pre-primary, 96% for primary, and 90% for secondary, with parity between girls and boys. In 2018 Chile spent more on education, from public and private sources, than all OECD countries except Norway, though with a relatively high share of private spending (Figure 17).

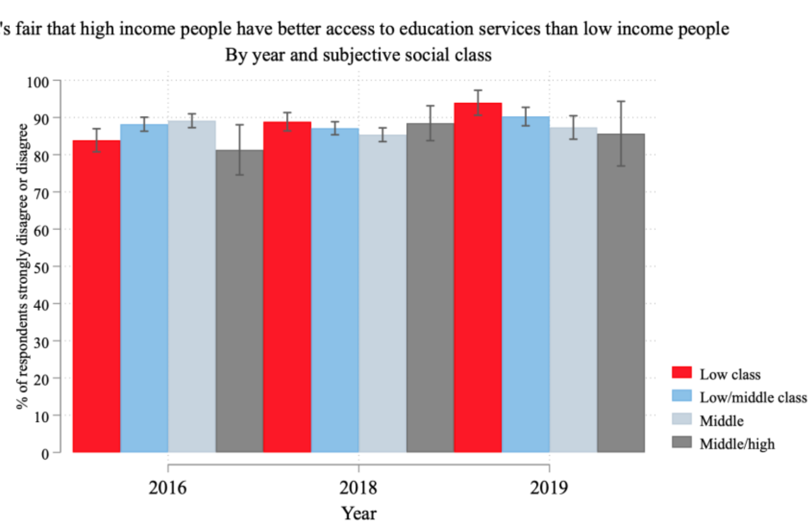
Figure 17. Chile spends more on education than almost all other OECD countries



Note: Primary,secondary and post-secondary non tertiary education includes pre-primary programs. Source: OECD (2021), Education at a Glance 2021: OECD Indicators, OECD Publishing, Paris, https://doi-org.ezp-prod1.hul.harvard.edu/10.1787/b35a14e5-en.

However, Chile has experienced huge discontent over education quality. As noted in Part 1 of this study, the sequence of societal protests was effectively launched in April 2006 by some 600,000 high school students from public schools demanding better education. This was followed by massive protests led by university and secondary school students in 2011 (joined by some teachers and workers) demanding "public, free and quality education for all" and "no more profit." Our analysis of representative surveys of citizen's views, found that an almost universally held view across social classes and educational categories is that it was unfair that high income people have access to better education quality (see Figure 18, also from Part 1).

Figure 18. Almost all Chileans disagree with the proposition that the Chilean education system is fair

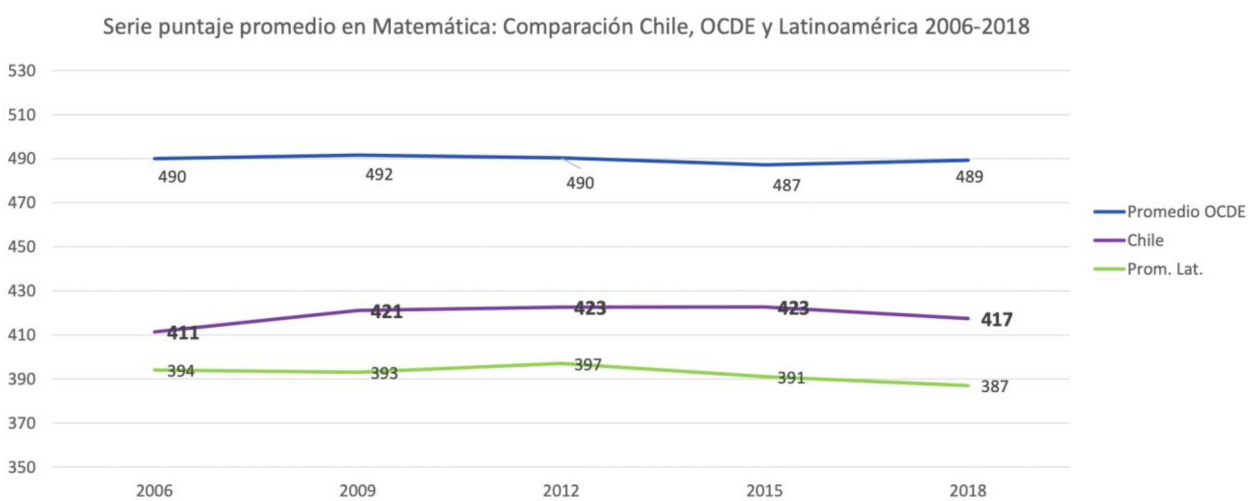


Source: Authors calculations from ELSOC

Is this discontent justified? The core interpretation for this paper is that the Chilean education system, despite a series of well-intentioned reforms, is a potent source of the reproduction of inequalities, and this is associated with low educational quality for significant parts of the student distribution.

In terms of overall averages, the OECD's PISA survey finds, that Chile has higher *average* quality than other Latin American countries, but significantly worse quality than the OECD average: see Figure 19 for the critical dimension of mathematics; similar patterns occur for reading and science, if with a slightly lower deficit relative to the OECD average.

Figure 19. Chile's PISA scores are below the OECD average but above other Latin American countries



Source: https://archivos.agenciaeducacion.cl/PISA_2018-Entrega_de_Resultados_Chile.pdf

But the real action occurs in the distribution across types of school and socio-economic categories of students. The 1980 reform was a key juncture. In the effort to bring more choice and competition into the schooling system, the reform brought the equivalent of charter schools in a form of voucher system. Prior to 1980, the top socioeconomic class went to private schools, the majority of the middle class went to public schools while lower classes of the distribution didn't finish school. After 1980, charter schools could receive profits and select students, while public schools would be administered by municipalities. This led to a major expansion of charter schools and competition to attract students in order to get the subsidy from the state. Charter schools could choose who to accept, and generally attracted middle class school students. Public municipal schools were left in charge of those students with lower socioeconomic status or with weaker initial educational skills.

In 1994 co-payments from parents were introduced, and this led to further differentiation within the system. Only families that could afford to pay attended charter schools. A third category of private fee-paying schools are even more expensive, and became effectively the preserve of the higher classes. By 2013 we see a dramatic sorting of children by the socio-economic class of their parents across the three categories of school–Table 2. Note that classes are defined by social status, with ~20% low class, 35% lower-middle, 24% middle, 13% higher middle and 8% high class.

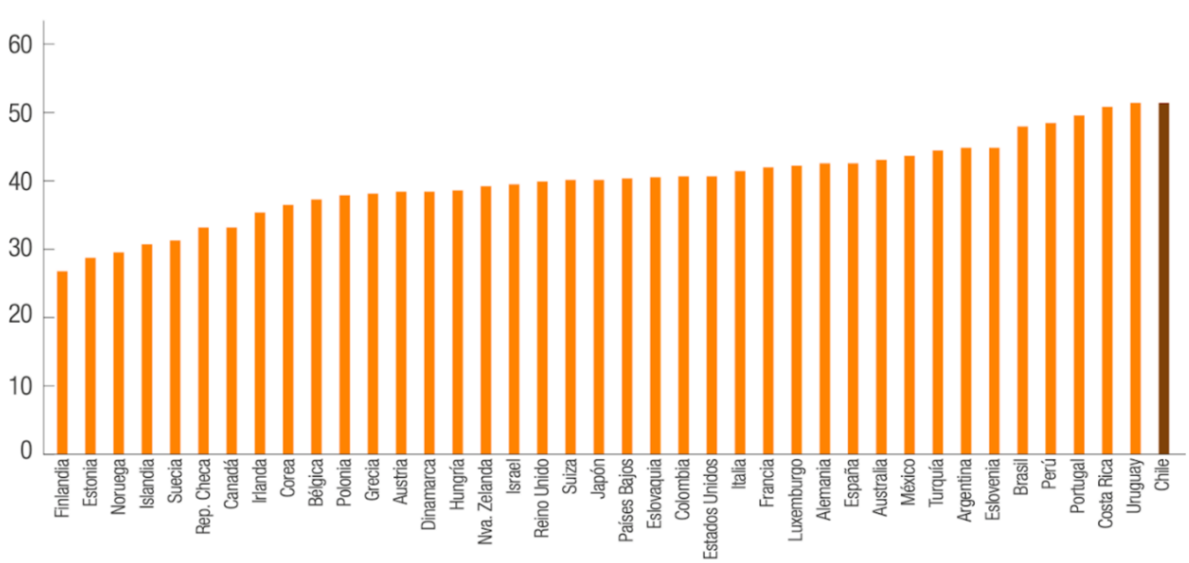
Table 2. There was a strong relationship between a child's class and the type of school they attended in 2013

Class	Municipal	Charter	Private fee paying	Total
Low	73%	27%	0%	100%
Lower middle	53%	47%	0%	100%
Middle	22%	78%	0%	100%
Higher middle	9%	91%	0%	100%
High	0%	1%	99%	100%

Source: Agencia de Calidad de Educación, 2013

By the Duncan Index–that measures the degree of segmentation across school types–Chile had the greatest segmentation of any country, measured in a survey by the OECD, though several other Latin American countries, including Brazil and Peru, were not far behind (Figure 20)

Figure 20. Chile had high levels of segmentation across school types by international standards



Note: The graph shows the Duncan index for the 5th quintile.

Source: DESIGUALES (Frei et al 2017) based on PISA 2012.

In reforms undertaken in the 2015 *Ley de Inclusión,* selection by schools was abolished, and parents were free to choose their school. However, geographic location continued to lead to high levels of sorting, with parents with lower socio-economic status typically choosing municipal schools that were closer to their houses. This sorting matters, because quality of schooling is a big divider. This is apparent in large differences in test outcomes (from the PISA again) across school types, as shown in Table 5. Note that the "elite" fee-paying schools have test outcomes above the OECD average, if still below the level of the best five OECD countries. Municipal schools have the worst.

Table 3. Schooling quality varies a lot by school type, and is worse in municipal schools

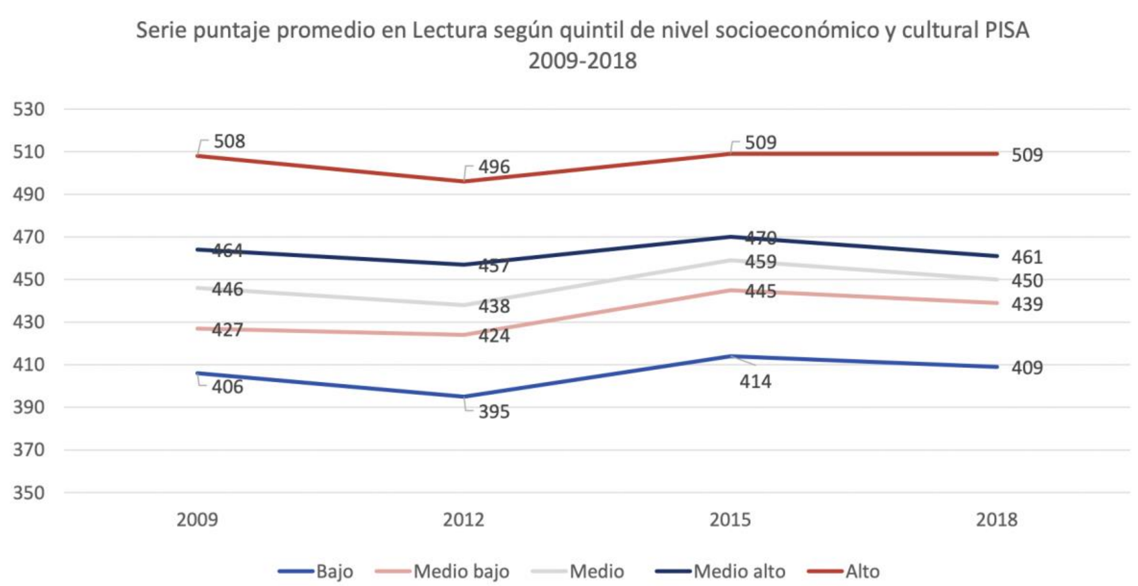
Average grade in Mathematics and Language by administrative unit

	Maths	Language
Municipal	391	412
Subsidized private	430	449
Paid private	518	522
LAC average	397	413
OECD average	494	496
Top 5 OECD	572	546

Source: https://www.oecd.org/education/school/Spanish-background-report-Chile%20.pdf

School type is not the full story: there are also differences by SES within each type, and the distributions actually overlap. Children from "higher middle" socio-economic status households in municipal schools, score around the same or better than high class children in the fee-paying private schools.

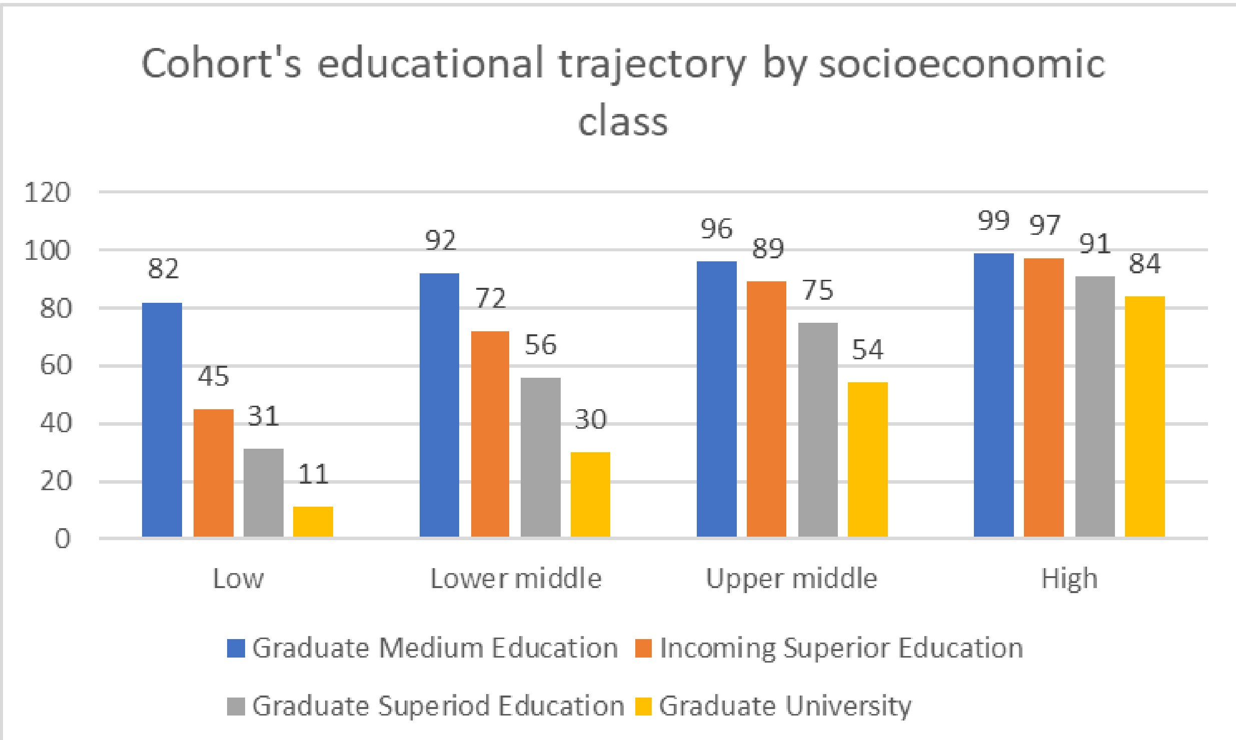
Figure 21. There are large differences in reading quality by the socioeconomic status of students' households



Source: OECD

The next phase of sorting across socioeconomic class occurs in how long students stay in the educational system. Despite high enrollment rates in high school education, there are sharp differences in attendance, and especially in graduation at higher education. The greatest difference is the percentage that graduated from universities. In 2003, 84% of students from high class backgrounds graduated from university, compared with 30% from lower middle and 11% from low class households (Figure 22).

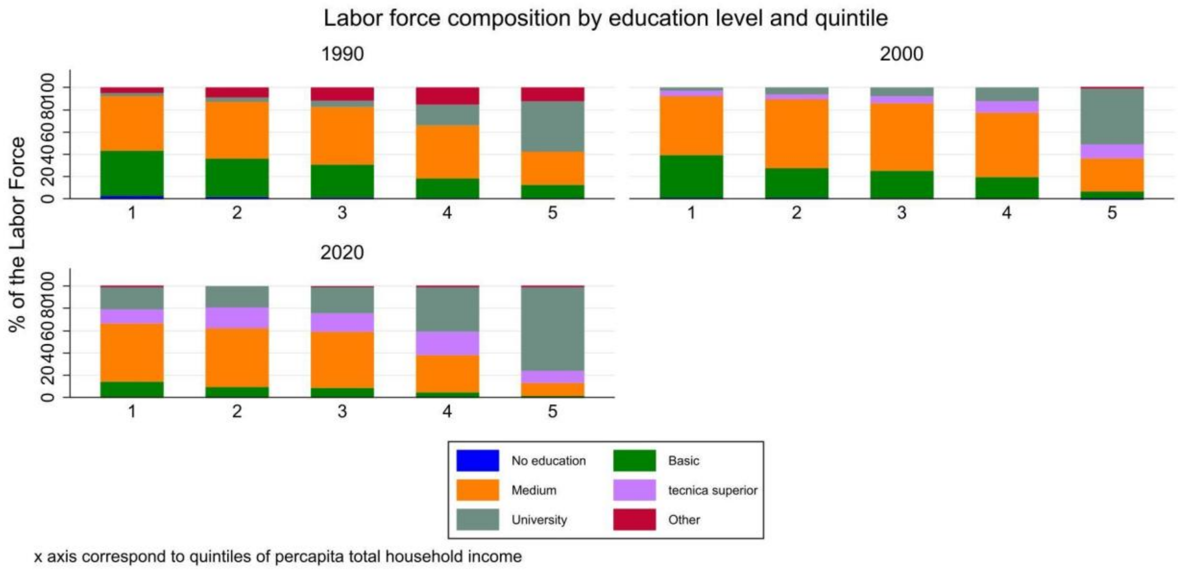
Figure 22. There are dramatic differences on graduation rates across socioeconomic classes



Source: Frei et al. (2017)

It takes time to transform the educational composition of the adult labor force. However, using a different source (the Greater Santiago Labor Force Survey) we see both a very substantial upgrading of educational qualifications of workers between 1990 and 2020, but stark contrasts across income quintiles (Figure 23). A large majority of current workers in the top quintile have university education, while the bulk of workers in the bottom three quintiles of workers don't. Of course, since this is by income of current workers, this reflects a consequence of returns to education, as well as the educational attainment by socioeconomic status of households (i.e. of parents).

Figure 23. There have been large long-term rises in educational attainment across the labor force, but these remain unequally distributed. (Composition of the labor force in the Greater Santiago area)



Source: Authors' calculations based on EOD various years

The intergenerational transmission of education differences is also shown in specific studies of the relationship between children and parents. Parental education, or coming from a high-income background, influences whether children pursue higher education and whether they graduate from it (Urzúa, 2012; Reyes et al., 2013; Rubio, 2016). Indeed, data from the CASEN 2009 show that 74% of students who did not finish higher education came from families where they are the first generation to attend a tertiary establishment. They were also 60% more likely to drop out (Urzúa, 2012). Labor income is then 76% higher for those who graduate from universities than for those who participated in higher education but did not graduate (Urzúa, 2012). Rubio (2016) shows evidence that there are *no* marginal returns for incomplete levels of higher education. Labor income is 59% higher for those who graduate from universities than for those who graduated from Technical Institute or Professional Institute (Urzúa, 2012).

There is then further differentiation *within* the university system. Zimmerman (2013) showed that studying at the best universities (*Universidad de Chile* or *Universidad Católica*) and the best careers (Law, Commercial Engineering, or Civil Engineering) can increase by 50% the possibility of the student obtaining a leadership position in the business world, but only if that student came from Chile's elite high schools. Another study finds that job offers from one of these top universities favored students from elite families–as proxied by surnames–even when they had worse measured GPA (Nuñez and Gutierrez, 2004). This is a reflection of the broader phenomenon of individuals matching with people that are similar to them (Jackson, 2021; Rubio, 2016). Access to elite universities is a source of social networks, and this is magnified by family and associated socio-cultural connections.

The issues within the education system are well-known amongst educational experts in Chile–and the discontent is representative of concerns in the larger society, as discussed in

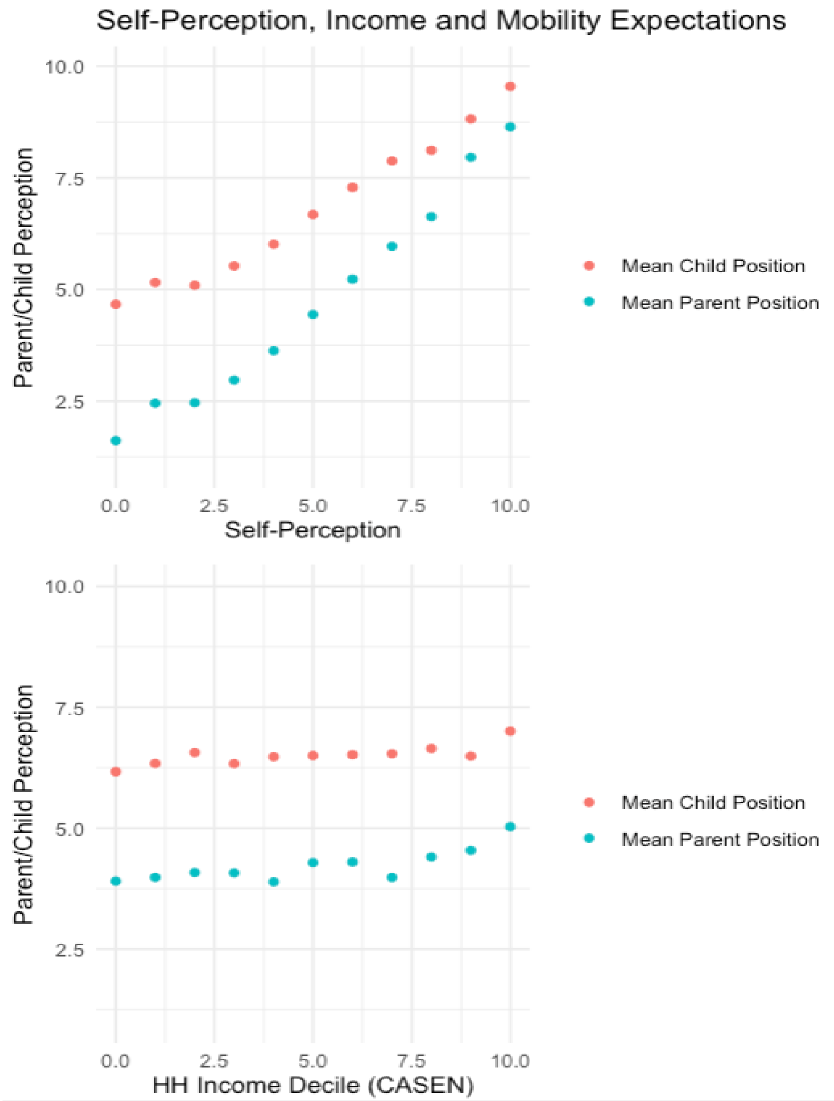
Part 1. This has led to a number of reforms, including the creation of the Higher Education Quality Assurance System in 2007 to ensure quality higher education and gratuities for higher education for all the students below 60% of the distribution of income. In 2015, the *Ley de Inclusión* ended selection, co-payment, and withdrawal of profits from charter schools, and in 2016, the System for Teacher Professional Development was implemented. This reduced teaching hours among other changes to improve teacher's work. In 2017 governance changes for municipal schools were introduced, with their progressive transfer to new "local education services". Regarding inclusion and equity, PIE (*Programa de Integración Escolar*) and SEP (*Subvención Escolar Preferencial*) have given resources to targeted minority groups. Recommendations from educational observers include improving the position of teachers (who are relatively underpaid and work longer hours by OECD standards), to put more effort into supporting vulnerable groups, including on retention in schooling, and increased accountability with respect to results. (See, for example, Santiago et al 2017, OECD 2019).

The role of social and cultural capital

As noted in the introduction to this section, both social capital and cultural factors can be sources of inequality. This works at many levels, including actual discrimination but also the internalized structure of norms and practices associated with what Arjun Appadurai characterized as the culturally shaped "terms of recognition in a society" (Appadurai 2014). This can work at many levels, and can operate through differences of class, ethnicity, gender and other patterns of social identity, and can interact with other sources of difference. There is evidence of the educational choices of Chilean indigenous groups being affected by concerns over discrimination in schools (Hoflinger et al, 2021). This is consistent with continued discrimination in the labor market for indigenous groups: Montero and Garces (2009) found an adverse wage penalty of about 12% after controlling for characteristics (though the unadjusted penalty had declined owing to advances in education within the indigenous population). With respect to gender, Contreras and Plaza (2010) find that cultural norms affect women's choices to work, finding "that the more the women have internalized *machista* and conservative cultural values, the less they participate in the labor market. ….these cultural factors as a group more than compensate for the positive effect of human capital variables.." (ibid. p.27)

Socio-cultural inequalities can influence household and individual behavioral choices. In the same article Appadurai characterizes the "capacity to aspire" as a cultural capacity, created by interactions and practices both within and between groups, influenced by adverse terms of recognition. While this is a complex capacity to measure, an illustrative proxy is in the aspirations parents have for their children. The ELSOC seeks to capture this through "expectations" of the future social class of their children. Figure 24 (discussed also in Part 1), maps self-reported current social position against aspirations for the future social position of children, and then also does this against measured income (using the CASEN distribution). Two features are striking. First, all groups, including those with lowest social status, have aspirations for their children substantially above their own. But second, future aspirations remain correlated with current perceived social status, but not with actual income–suggesting self-perceived status is the primary driver. Thus the aspirational map is a potential source of positive change, but also of potential frustrated expectations–and thus a likely driver of protest. And even in the space of aspirations it is a potential force to reproduce existing inequalities.

Figure 24. All groups have aspirations for upward mobility of their children, positively associated with perceived social class but not measured income



Source: Authors calculations from ELSOC and CASEN 2017

These socio-cultural differences also operate effectively amongst elite interactions, as we saw in the evidence on recruitment preferences from elite universities above. It is vividly illustrated by the analysis in Frei et al (2017) on the relative position in society of individuals with elite and non-elite surnames.

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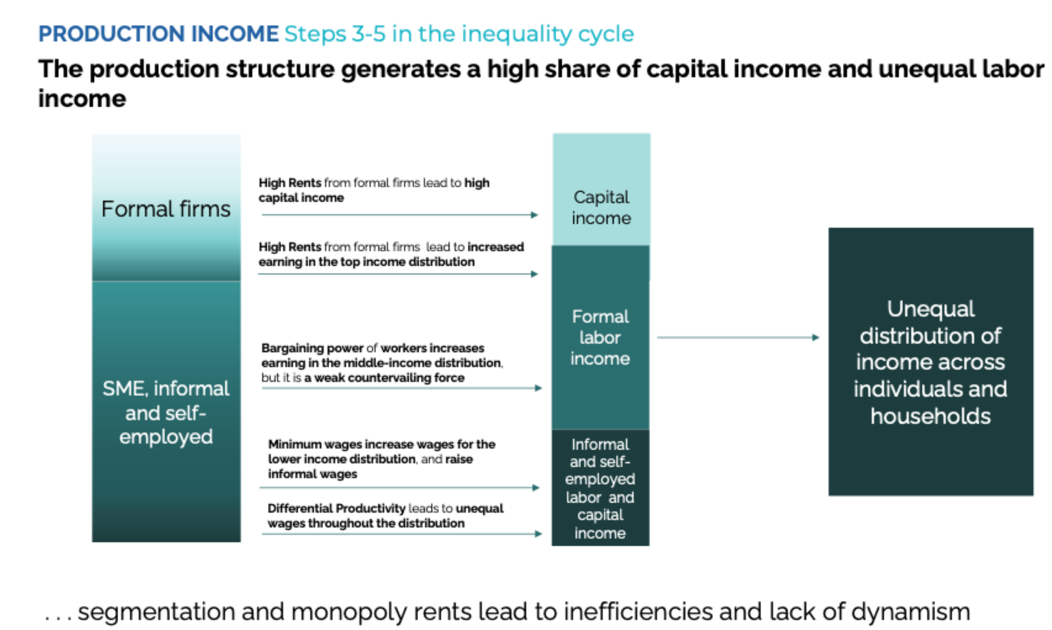
This section explored the role of different forms of capital in the persistence of inequality. This emerges as a powerful source of the reproduction of inequalities across generations, via the wealth, social and cultural advantages of households to pass on to children greater wealth, education, networks and cultural sources of advantage or disadvantage (via aspirations and unequal terms of recognition in society). As in other sections, this study did not develop specific views on policy design. However, we highlighted the unusually low level of inheritance taxes, and, by contrast, significant policy reforms in education. We emphasize that the task of achieving equal opportunities via education is a long-term and demanding task. Currently education tends to reinforce rather than reduce inequalities in the system. It is important to keep exploring ways of increasing quality, especially in the middle and bottom of the schooling system, to recognize the powerful cumulative nature of educational and skills acquisition, from early childhood on, to develop mechanisms for preparing students from non-elite schools and backgrounds for tertiary education, and to support completion. How to effect this is a classic, complex challenge for educators and society. As noted in the section on absolute poverty, tackling the socio-cultural basis of difference is a broader societal issue. Civil society has an important role, as does further attention to tackling any discrimination. The state can play a role in its practices and interactions, including, as some argue, in action to foster the capacity to aspire at local levels through interactions with social groups (as argued for Colombian rural youth by López-Muñoz & Bert Ingelaere, 2021)

4. The distribution of earned income

Let's now turn to inequalities associated with the working lives of Chileans, the "production phase" in Blanchard and Rodrik's taxonomy. The main story here is of a production structure that generates high inequalities of earned income, both between capital and labor income, and within labor income. Figure 25 provides a heuristic schematic of our interpretation.

Figure 25. Production structures creates highly unequal earned incomes



Source: Authors

To provide motivation for the assessment, here is a contribution from the ongoing "Deaton review" of inequality in the UK emphasizes:

> "much of the structure of income inequality arises from the structure and behavior of firms. If the labor share falls then more money is being distributed to the owners of capital, who in general are likely to be better off than workers. If firms reward a small number of their most senior employees much more than

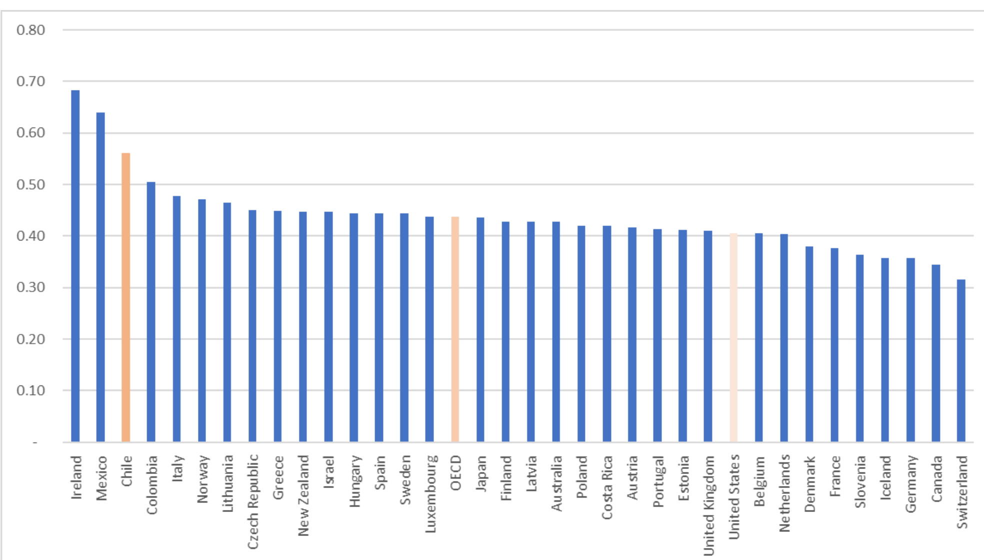
the bulk of their employees then earnings inequality will be high. If some firms are very much more successful than others, perhaps because they are much more innovative and/or perhaps because they have secured some form of monopoly position, then their employees and shareholders may do especially well, perhaps at the expense of consumers. If firms as a whole are not becoming more productive then wage growth is likely to stall. If we want to influence inequality, and especially tackle some of the perceived intolerable aspects of current differences, we need to take seriously policy towards firms." De Loecker, Obermeier & Van Reenen, 2022.

This argument applies directly to Chile, with the added dimension of the importance of informality. In this section we first provide some motivation with respect to the high share of capital income. We then discuss production structure, the role of market concentration, and how this then interactions with labor market structures, and policies, to generate the distribution of labor income. While the primary focus is on inequality, we conclude the section with commentary on implications for growth.

Chile has a high share of capital income

Let's start with the observation that the aggregate share of capital in national income in Chile is one of the highest in the OECD, at around 55% (Figure 26), second only to Mexico and Ireland (that has special tax advantages for multinationals, to locate an office and profits in the country, with little actual production.) Capital shares are calculated as residuals from measures of labor income, and likely to be measured with error, so this should be taken as indicative.

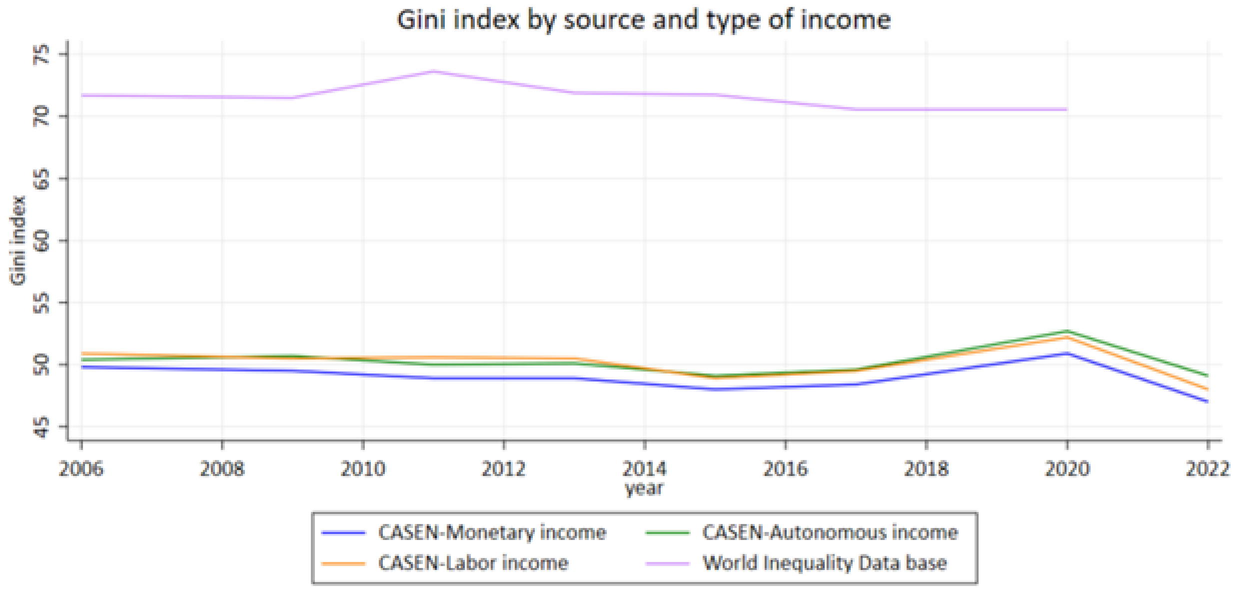
Figure 26. Chile has one of the highest capital shares amongst OECD countries



Source: Penn World Tables

This result is consistent with a key result from alternative measures of the distribution of personal income, that was discussed in Part 1. As Figure 27 illustrates, estimates of inequality in Chile are both much higher and more persistent using the methodology of the World Inequality Database, compared with the results of the CASEN household survey. The inclusion of "undistributed profits" (one part of capital income) has a substantial influence on the revised estimates.

Figure 27. Chile has much higher and more persistent inequality when capital income is included (as well as other adjustments to top incomes)



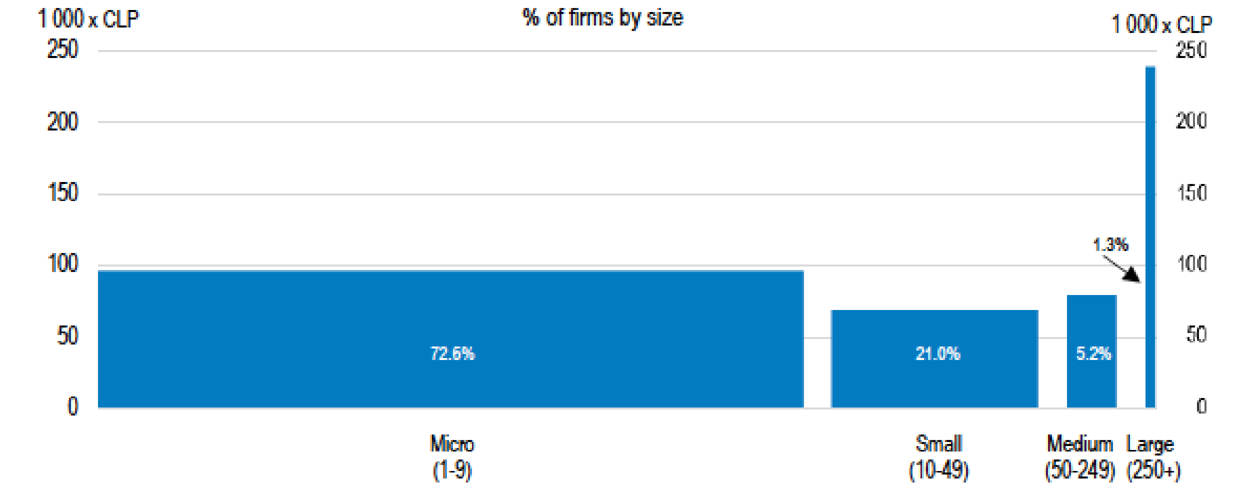
Source: Authors' calculations from CASEN and the World Inequality Database

Chile has high concentrations of ownership and market shares, with a long tail of small scale firms

How does the high capital share, and associated contribution to extreme inequality, relate to market conditions? We suggest three factors: concentrated *ownership* within the corporate sector, associated with the history of dominance of business families; concentrations in *market shares* in many domestic markets, and associated high economic rents; and a relatively weak labor movement and labor policies. This section reviews the issues in the firms sector; the labor market is discussed below.

Let's start with a picture of the overall firm structure. As Figure 28 illustrates, Chile has large numbers of very small firms with 1 to 9 employees, and a very small number of large firms, with large productivity differences between the large and small firms. And as the OECD document comments "The lack of a cohort of vibrant midsize companies is a brake to business dynamism and competitive pressure. It prevents the expansion of productive and well-paying jobs, and keeps the middle income class small."

Figure 28. Most Chilean firms are very small, and with low productivity



Note: The vertical axis refers to thousands of Chilean pesos

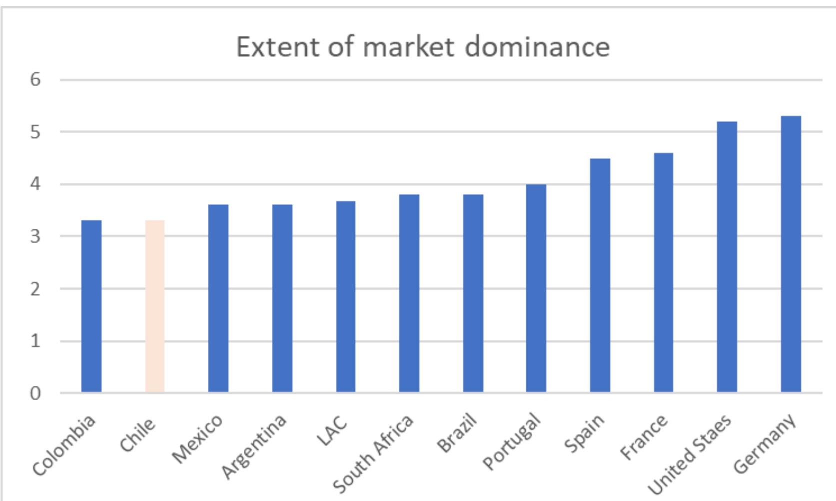
Source: OECD 2021, adapted from Figure 1.23, calculated from the Quinta Encuesta Longitudinal de Empresas, 2017 and OECD Productivity Database.

A lot of the action in production and distribution is in the large firm sector. We start there. In most countries of the world, from India to Sweden, conglomerates with significant control by business groups play a major role in the corporate sector. These are frequently organized in pyramidal structures that confer major influence on controlling firms at the top of the pyramid. The ideal of dispersed shareholder capitalism underpinning competitive capitalism is rather the exception (partially true of the US and UK for example, see Almeida & Wolfenzon, 2006). Chile is not an exception. The supposedly market fundamentalism of the dictatorship, under the advice of the Chicago Boys, did lead to significant changes in ownership structures but not a shift to dispersed shareholder ownership.

Under the dictatorship there was a major privatization of state-owned firms, that declined from a peak of 596 in 1973 to 45 state-owned firms in 1989. However, as documented by Aldunate, González, Prem and Urzua (2020) a key change occurred in the wake of the 1982/83 financial crisis. This caused significant destruction of major parts of banking capital, involving many long-established business families. This led to a new wave of privatization in the wake of the crisis and a striking renovation of business ownership, that especially benefited allies of Pinochet. This facilitated formation of new business groups built around privatized firms, while traditional elites were debilitated. Firms were bought by Pinochet allies, who placed them at the bottom of pyramids and used them as providers of capital within groups. There is also evidence of persistence. Firms privatized by the Pinochet regime were 32-37 percentage points more likely than a control group (of always-private firms in the same industry) to be part of new business groups after the transition to democracy. Overall, by 1990 70% of publicly traded firms were affiliated to a business group, compared to only 20% in 1960. High levels of dominance of large firms continued: in 2015, large firms accounted for 3.2% of the total number of firms in the Chile, but 82% of total sales and 54% of (formal sector) workers (*Ministerio de Economía,Fomento y Turismo* 2017)

The second feature of relevance is evidence of concentrated market power, that can be a source of excess profits (Figure 29). As discussed in part 1 of this project, one of the focuses of public protests has been anti-competitive practices of firms and associated losses to consumers, notably in the protests against high prices in the pharmacy sector in 2008 (*Colusión de farmacias*), in poultry and toilet and other paper in 2011 (*Colusión de los pollos*, and *Colusión del papel confort*) and accusations that the retailer La Polar had unilaterally renegotiated customers' debts. These were not isolated cases. The beer, tobacco, and domestic air travel area is dominated by a single company, and markets are also concentrated in the bank, social security and supermarket industries[7]. The Horizontal think tank estimated that Chileans spend 40 percent of their income in markets without any real competition (Horizontal, 2013). University of Chile scholar Javier Ruiz-Tagle estimates that these and other collusions, tax evasions, and corruption scandals amount to at least $4,982 million in losses for Chilean tax revenues and for consumers[8], while a study from Horizontal suggests that poorest families lost about 16 millions annually from the *collusion de las farmacias, pollos y transporte* (Medina 2014)

Figure 29. Compared with other countries, Chile is unusually dominated by a small number of business groups



Note: This indicator shows the extent of market dominance. Lower numbers implies that the market is controlled by fewer business groups. LAC is the non weighted average of Argentina, Colombia, Mexico, Brazil and Costa Rica.

Source: Global competitiveness Index World Economic Forum 2019

The evidence on productivity is more mixed. Large firms have higher levels of labor productivity, and large export firms almost double the average, but this remains low compared even with middle income OECD firms according to the *Comisión Nacional de Productividad*. We come below to potential impact with growth dynamics.

Firm and labor market structure leads to labor income inequalities

Now let's turn to the impact of the production structure on labor income. As noted in the quote from the Deaton Review, in addition to the division between capital and labor income,

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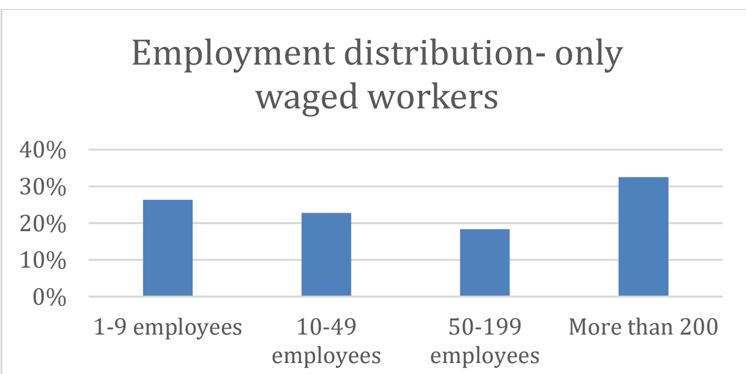
[7] "How economic concentration and crony capitalism led to chaos in Chile". Article published promarket.org on 10/22/2019 by Daniel Matamala
[8] "How economic concentration and crony capitalism led to chaos in Chile". Article published promarket.org on 10/22/2019 by Daniel Matamala

firm structure influences inequalities of labor income. In a Chilean context there are three major processes at work here: first, how the skewed firm distribution maps on to work and labor income; second, the influence of wage-setting within the large-firm sector; and third the influence of labor market policies and institutions.

The distribution of work can be viewed in relation to the size of firm, formality, and whether workers have permanent of temporary contracts. A worker is categorized as informal if they do not have access to pensions or health insurance through their work, or are unpaid family workers. These categories overlap: workers in very small firms are more likely to be informal and have temporary contracts. Figure 30 shows the distribution in 2017 by all workers (including non-wage) and by those receiving wages. This broadly maps on to the categories in the distribution of firms in Figure 28 above (with a slight difference in the largest category, here for those with 200 and more workers). Over 40% of all workers worked in very small firms. For workers receiving a wage, a quarter work in very small firms, and a third in the largest category.

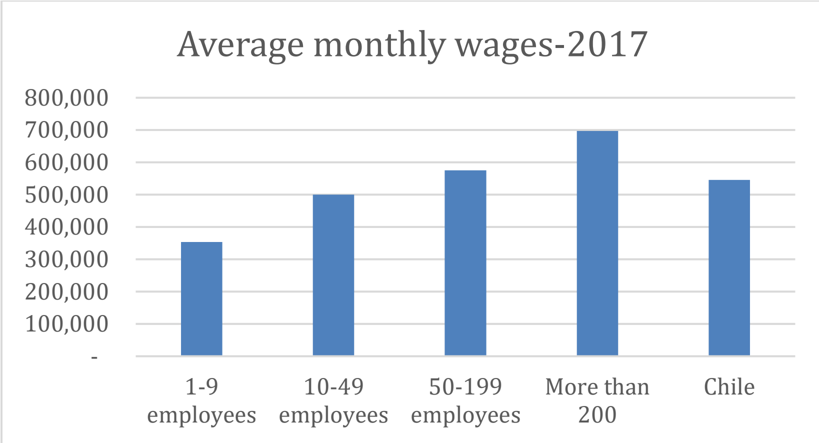
Figure 30. Workers are distributed across all sizes of firm.



Source: Authors calculations from CASEN 2017

On average wages rise with the size of firm, with wage workers in the largest category receiving about double those in very small firms (Figure 31). There are also large differences between workers with and without formal contracts, and with temporary and permanent contracts. For example, on average in 2017 workers with permanent contracts received about double those with temporary contracts.

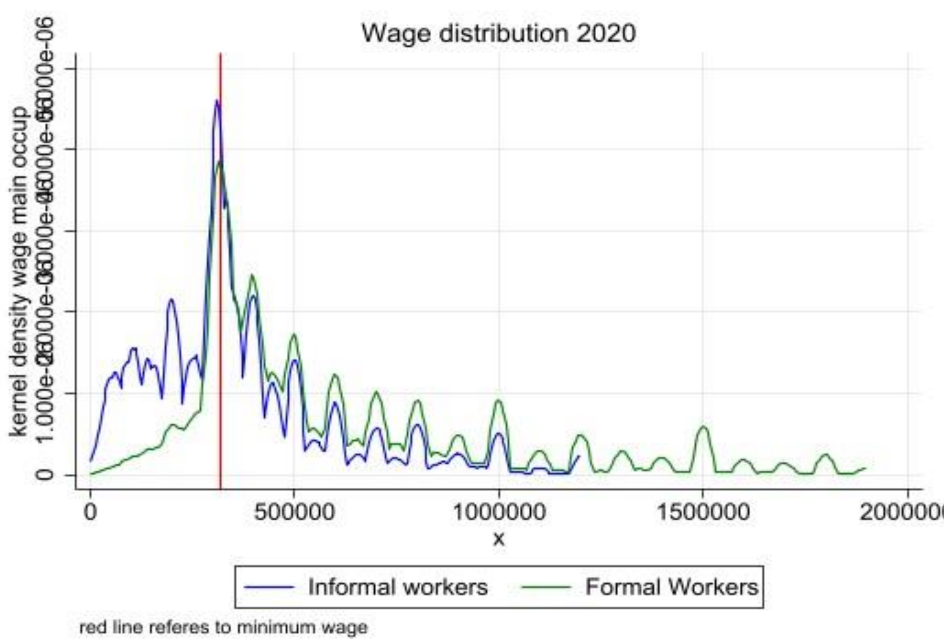
Figure 31. There is a hierarchy of wages from the smallest to largest firms



Source: Authors calculations from CASEN 2017

These averages hide substantial dispersion of wages across the whole distribution. Figure 32 shows the very wide dispersion with a long tail through to high earners, with overlapping distributions of formal and informal wages, but substantially higher for formal wage workers. While there is a large spread, this survey would almost certainly have not included CEOs and other top officers in firms. While informal workers are concentrated in very small firms, where a third are informal,, even the largest category of firms has almost 10% of workers without formal contracts.

Figure 32. There is a wide wage distribution of both formal and informal workers



Source: Authors calculations from CASEN 2017

These distributions of labor income reflect a mix of factors. As discussed in the preceding section, educational achievements, interacting with social capital (networks) and cultural capital have a powerful influence on the allocation of school and university leavers across types of work. This is partly a reflection of the market "working" in its allocation of human capital to the space of production. But this is only part of the story, with returns to workers also influenced by the type of firm, and the extent to which it combines with either more or less productive capital, and whether a firm is earning high rents and sharing this with workers.

A recent survey of OECD countries finds that one-third of overall wage inequality can be explained by gaps in wage-setting practices between firms, rather than differences in workers' skills. High-wage firms pay about twice as much as low-wage ones for comparable workers. When workers cannot easily move from one firm to another, e.g. because of job search and moving costs, wages are not only determined by workers' skills but also by firms' wage-setting practices (OECD,2021). Similar effects have been found in Chile (Marin, 2021, Huneuus et al 2022). This may partly reflect their ability to attract and retain higher quality workers (including on dimensions not captured by observable features in surveys). But it is also correlated with greater market power in output markets. Higher market power firms extract larger rents from consumers but also share this rent relatively more with their employees offering higher salaries (Marin 2021).

In related work, Huneuus et al (2022) decomposed inequality into two components: dispersion in average earnings across firms and within firms. They conclude that business groups contribute to earnings inequality by paying higher average wages than stand-alone firms. At the same time, business groups also have higher within-firm dispersion of salaries. Huneeus et al (2021) find that when external shocks affect the market, labor reallocates more between firms of the same group than unaffiliated firms, especially among high level positions.

These influences at the top of the firm distribution lead to higher inequality of labor income. At the bottom of the distribution, Figure 32 shows there are significant numbers of very low paid workers, especially in informal work and disproportionately in small, low productivity firms. It also illustrates the influence of minimum wages, with significant bunching around the minimum wage rate for both formal and informal workers.

Minimum wage policies have existed in Chile since 1934. Today, every Chilean firm with workers between the ages 18 and 65 with formal labor relationships is required to comply with this national-level policy. The minimum wage is determined as a monthly value that assumes full-time work with proportionate adjustments for part-time work. Recent changes involve discussing re-adjustments in Congress every six months instead of yearly. As just seen, minimum wages are binding for an important proportion of the population and the minimum wage has doubled over the last decade. This trend is similar to other Latin American countries such as Brazil or Bolivia. In real PPP terms the Chilean minimum wage is higher than comparators (Soares and Silva, 2018).

The concern with minimum wages is that they will lead to reduced employment demand, especially in low productivity work. However, the evidence in Chile suggests minimum wage policies have small effects in employment (Bravo and Contreras, 1998). More recent evidence (Grau et al. 2018) uses a panel of workers from unemployment insurance and shows small positive and significant effects on wages but no effect on formal employment. In terms of inequality, evidence from Grau and Landerretche (2011) suggests that minimum wage had an equalizing effect in wages between 1996 and 2005. Using a panel data set of the Chilean National Employment Survey, and several empirical strategies that include statistical matching and difference-in-differences, they find significant increases in wages for the treated group of workers that became eligible for the minimum wage with the change in policy.

Finally, labor unions can be a countervailing force to high levels of capital income, but these are relatively weak in Chile. Between 10 and 15 percent of the population in Chile is unionized today (OECD Stat, Trade density, 2018). Union development was shaped by the effects of the policies that were initiated under the dictatorship, when union regulation was adapted to the new "neoliberal order" (Cabaleiro and Guttierrez, 2019). In particular, the "Plan Laboral" of 1979 involved a set of reforms that limited collective bargaining to the firm and imposed limits to strike, for example, allowing firms to replace striking workers (Vallejos, 2012). Other particularities include membership not being compulsory to receive benefits of negotiations and the existence of para-union negotiation structures ("negotiation group") (Landerretche et al. 2013).

After the 70s, unionization trends in Chile presented a similar decline to the ones in the US and some European countries (Visser, 2019). Union adherence in Chile is concentrated in large firms and some specific industries: it is higher in the export sector (notably in mining) as well as in the service sectors of education and health.

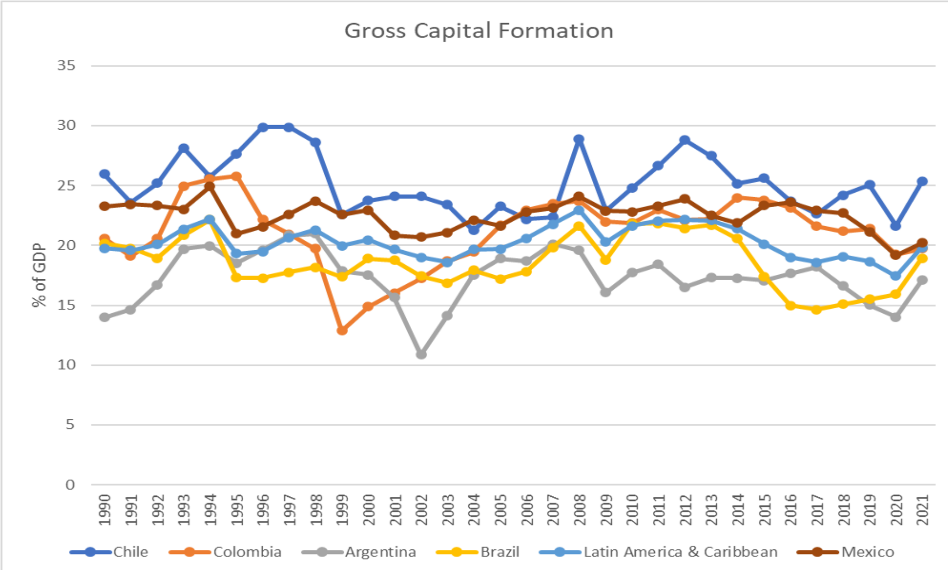
While unions have limited reach, they do raise wages where they are involved in wage bargaining. Landerretche et al. (2013) use a two-stage approach to estimate the effect of being part of a union in wages. After correcting for the decision for union participation, they estimate that union adherence is associated with a wage premium of around 20%. They find that this effect is particularly large for low wage individuals at the low tail of the distribution.

Has Chile's firm sector been good for growth?

While high levels of concentration of ownership and markets are sources of inequality, has the corporate sector been a source of the growth? We saw above, that growth was a major direct and indirect (via government taxes and transfers) of the dramatic decline in absolute income poverty. This would support an argument that concentrated income and wealth worked for all through trickle down effects.

This couldn't be formally tested for this paper. In particular, we don't have a counterfactual of what growth would have been like without business concentration. However, descriptive evidence is mixed. It is true that Chile had high levels of private investment, especially in the 1990s and early 2000s, and the corporate sector was an important part of this (Figure 33). The continuity of the pro-business economic regime was undoubtedly a factor in this. There are classic arguments that uncertainty is a major source of low private investment. A political economy variant of this is that the reciprocal understanding between political and economic elites is a source of credibility, including in the persistence and sharing of economic rents (see Haber et al, 2003 for a classic study of Mexico). We would further expect that dense linkages of social and cultural capital amongst elites, noted in the previous section, would also support this.

Figure 33. Chile's private investment was higher than comparators in Latin America



Source: World Development Indicators

However, the larger problem for Chile's growth is the decline in productivity growth. A measure of total factor productivity growth (increase in productivity after accounting for all factor inputs, including labor and capital), finds rapid growth of 3.6% per annum between 1990 and 1995, falling to 1.1% between 1995 and 2005 and then negative between 2005 and 2017, with a modest recovery in 2018--attributed to relatively well-educated immigrants (*Comisión Nacional de Productividad*, 2018). The government's own analysis interprets the productivity decline in terms of several factors. These include particularly low levels of research and development spending by the private sector, at 0.14% of GDP, and low levels of competition in the corporate sector (*Ministerio de Economía, Fomento y Turismo* 2017). Empirical work on firm growth highlights a weak process of resource allocation toward more dynamic firms, whether in the small or large scale sector *(Canales, Mario, and Álvaro García Marín 2018*).

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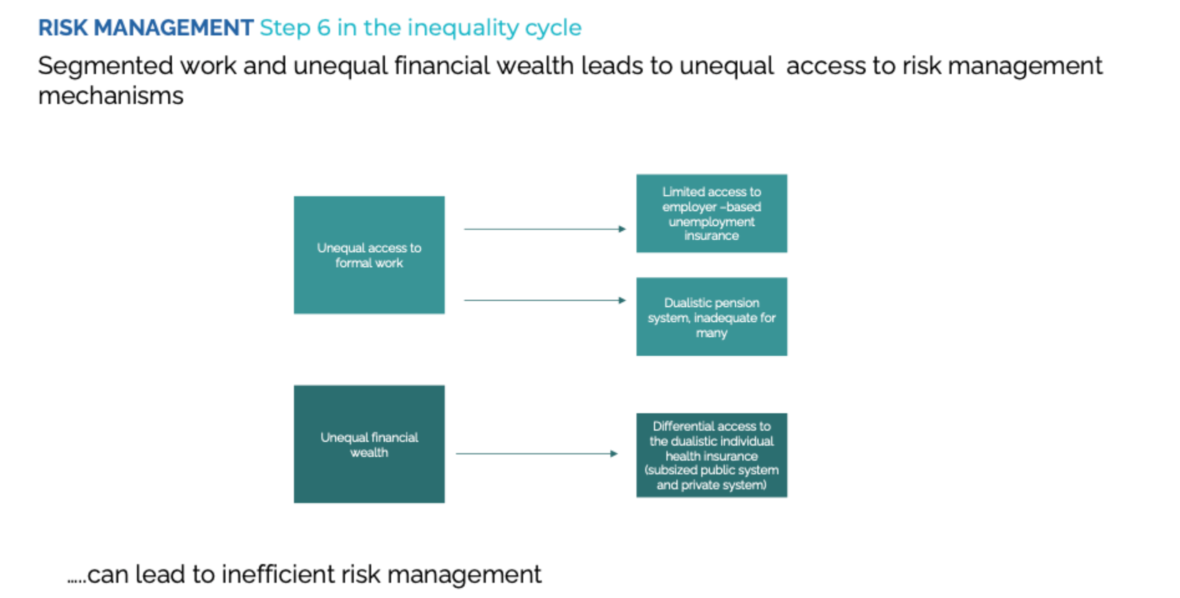
This section reviewed the forces behind the distribution of income from capital and labor. The main theme is that the highly unequal observed overall distribution is to a significant extent driven by the structure of the business sector. A highly concentrated ownership structure of large firms is associated with a high share of capital income in Chile, and contributes to inequalities in labor income. The other side of this is a long tail of micro, small and medium enterprises, that has as its counterpart a high fraction of temporary work, even though actual informality of work is relatively low by Latin American standards. While large firms are more productive, the evidence suggests that concentrated firm structure is both inefficient in static terms, and is a source of the low and declining productivity, with insufficient reallocation of resources to dynamic firms, as well as low levels of research and development.

5. Risk management and social protection policies

Chile's growth has created a new middle class. While many were lifted out of income poverty, as seen in the section above, they remain vulnerable to a variety of risks. Mechanisms to manage risks are unequally distributed (Figure 34). This tends to sustain and increase inequalities.

Figure 34. Risk management mechanisms are unequally distributed, exacerbating differences



Source: Authors

As we showed with education, the social assistance elements of social protection have been reasonably successful at establishing social service provision floors—minimums available to all citizens in worst-case scenarios. The next necessary step in the development of sustainable growth is creating incentive-compatible, fiscally sustainable social protection for risks so that the middle class can endure negative shocks and remain on a path of continued growth as individuals and households. In this section we outline some citizen views regarding key vulnerabilities, the current landscape in Chilean institutions and reforms that have sought to redress them. We organize this around the three most important types of economic risk– labor market, health, and old age.

Labor market risks

In the labor market, a primary concern is the risk of unemployment. On the one hand it is a first order income shock (only partially offset by severance payments for formal work). On the other hand, a dynamic labor force is a key driver of productivity growth, through the process of reallocation, or matching, of workers to more productive jobs as an economy develops (Mortensen and Pissarides, 1994). Providing insurance against unemployment helps smooth consumption for workers (and possibly increase investment in good times) but at the same time serves as a subsidy for productive job search and can thus improve economy-wide total productivity.[9] Fiscal responsibility and efficiency however requires balancing income support during unemployment spells with providing incentives for job search. Otherwise dependence on insurance could substitute for gainful employment and reduce productivity. However, the

[9] The downside is, of course, that in the short-run it is a disincentive to find employment. Unemployment dynamics can thus conceal welfare gains when workers are indeed looking for better opportunities. See Herkenhoff 2019 for a model and empirical facts on self-insurance via credit access and employment transitions.

incentive for such dependency does not appear high when unemployment insurance is significantly less than prevailing wages.

International evidence suggests that adverse incentive effects on work for most unemployment insurance policies are minor. For example, evidence on an extreme form of these policies, universal basic income, has thus far found no effect on the probability of finding work and limited reduction of labor supply (Marinescu, 2020).[10] Similar analyses of welfare programs in Michigan (TANF) and expanded nation-wide unemployment insurance during the COVID-19 pandemic in the United States show sudden cuts in transfers decrease unemployment by around 4%, or a 20% higher probability of being employed (Coombs et al. 2021, Al-Chanati and Husted forthcoming). This means the majority of people who lost benefits remained unemployed. Moreover, and crucially, those who found jobs after benefits ended were unable to make up the lost income and thus also suffered a steep fall in real consumption.

The Chilean labor force is quite dynamic, with estimates of monthly separation rates ranging between 2% and 5%, implying over 30% of the labor force leaves their current job in any given year. The job finding rate, on the other hand, is around 20% in an average month (Albagli 2016, Marcel and Naudon 2016, Naudon and Pérez 2018, with different sampled time intervals and data sources). These flows are similar to those of Canada, New Zealand and Norway, while significantly lower than those of the United States and higher than much of Central and Southern Europe. An important difference, however, is that Chile has an overall higher unemployment rate than most of these developed counterparts.

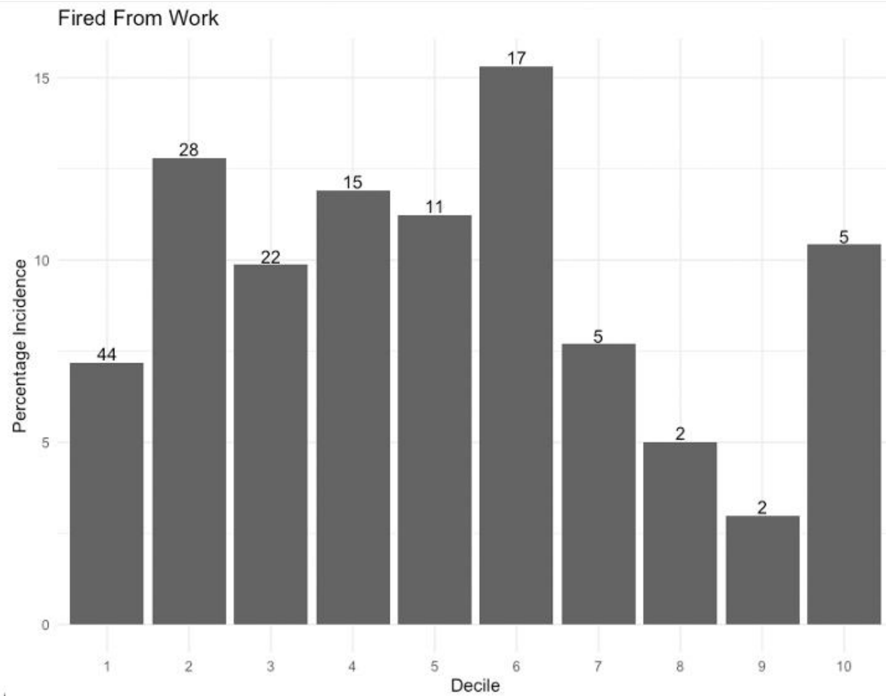
We can also compare these separation rate estimates with COES/ELSOC panel survey data. While the separation rates just cited are based on cross-sectional unemployment and covariate measures to estimate employment transitions, the ELSOC survey is based on an individual's actual experience. Furthermore, the survey does not ask for transitions generally but rather if respondents had been "fired in the last year" and so would exclude voluntary separations. The measure is particularly useful since what is interpreted by respondents as "firings" are more likely to fall within our scope of exogenous shocks as opposed to choices or "predictable" expiration of limited-time contracts. This type of unexpected event has also been found to have a significant negative effect on lifetime earnings (Albagli et al., 2019). For the sampled years the average probability of being fired in the last year is 13% (11% in 2016 and 14% in 2018). Of those fired during the last year, an average of 65% had found a job (either part or full-time), while 21% continued to be unemployed (24% in 2016 and 19% in 2018). Those with lower household income are also significantly more likely to have been fired in the last year, but this would be at least in part due to the loss in income in the current period. If we instead exploit the panel structure of the dataset to use household income in 2016 of those who had not been fired in that same year to predict the probability of being fired in 2017-2018, we can see the relationship is quadratic, with the middle class having greater vulnerability to being laid off (Figure 35). (There is a relatively high rate of reported firings in the top decile, that

[10] The behavioral argument that can underlie these results is that work, or at least some forms of it, provides non-pecuniary utility, as evidenced by lottery winners who do not drop out of the labor force. Cash transfers can thus lead to greater human capital investment and better job search, but no change in labor participation in the aggregate. This is particularly true if the transfer is strictly less than the fully employed counterfactual.

could be due a small sample in this group, so is likely a statistical anomaly.) The question then becomes, how is unemployment insurance protecting middle-class income?

Figure 35. The probability of being fired from work in 2017-18 was higher for individuals in the middle of the distribution

	Probability Fired
(Intercept)	−1.567
	(0.115)
HH Decile	0.172
	(0.065)
HH Decile^2	−0.018
	(0.007)
Num.Obs.	1593
R2	0.007
R2 Adj.	0.003
AIC	997.5
BIC	1013.6
RMSE	0.29
Std.Errors	IID



Note: Numbers are the absolute numbers of individuals fired in each group in 2018 that were also present in the 2016 sample; income deciles are based on household income categories from deciles in the CASEN survey, and so are not of equal size in the ELSOC survey. The above results are from the following Probit regression:

$$Prob(Fired|HH\ Decile) = \Phi((HH\ Decile)\beta_1 + (HH\ Decile)^2\beta_2)$$

Source: Authors' calculations from ELSOC and decile thresholds from CASEN 2017

Unemployment insurance in Chile currently protects formal workers (those who have a contract of any duration) by replacing a fixed percentage of their average income, which decreases month to month. This is a "defined contribution" scheme, in which the primary source of income when unemployed is the stock of a worker's own private savings, set at 3% of total income with 2.2% going to the individual account and the remainder contributing to a social security unemployment fund (*fondo de cesantía solidario*, FCS)[11]. The latter fund complements self-funded UI payments if the personal account gets to zero balance before the third or fifth month (depending on contract type). An important requirement to receive payments is at least 12 months of contributions for unlimited time contracts and 6 for others. The requirements for receiving payments from FCS are more stringent in that only certain

[11] 0.6% of total wages are paid by the employee while 2.4% are paid by the employer for unlimited-time contracts. The effect of the breakdown on total wages will depend on a variety of factors, including labor market conditions, tax incentives, and behavioral perception of wages and contributions.

kinds of terminations grant access. The formal requirements for eligibility are shown in Table , and the average pattern of replacements in Table 5.

Table 4. Requirements for workers to be eligible for unemployment benefits (FCS)

Recent contributions	• 12 payments towards the fund in the last 24 months, before the beginning of the current unemployment spell. • The THREE latest payments must have been uninterrupted and with the same employer
Termination Cause	• End of limited-time contract (either by time or project) • *Force majeure* • Employer bankruptcy • Employer needs

Source: Administradora de Fondos de Cesantía and Law 20829.

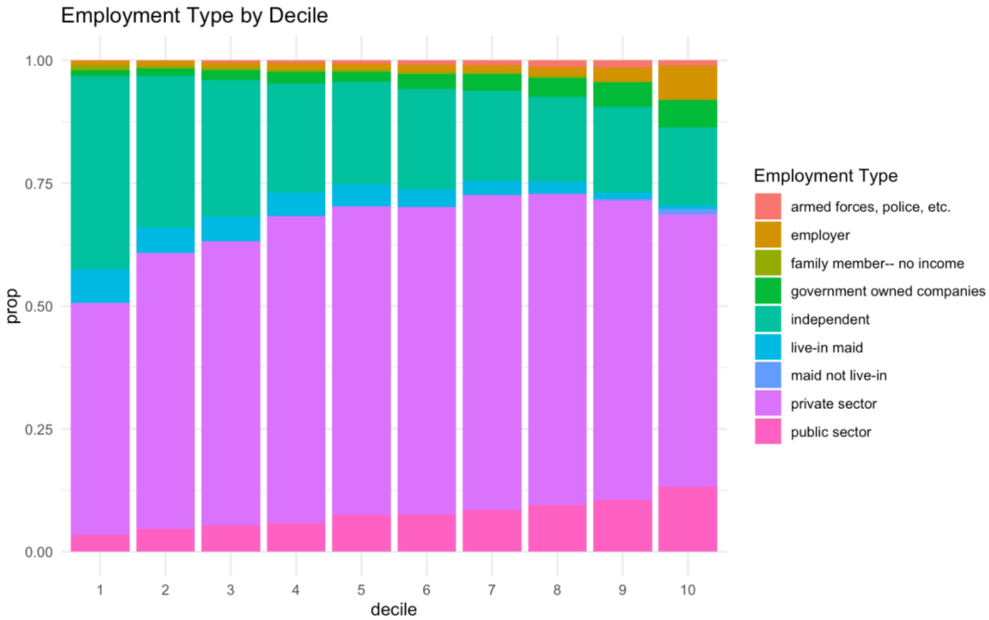
Table 5. Income replacement from unemployment insurance is low after the first month or two, and largely disappears after a few months.

Month	Permanent Contract	Temporary Contract
	% of 12 month average wage replacement	% of 12 month average wage replacement
1	70%	50%
2	55%	40%
3	45%	35%
4	40%	-
5	33%	-

Source: Administradora de Fondos de Cesantía and Law 20829.

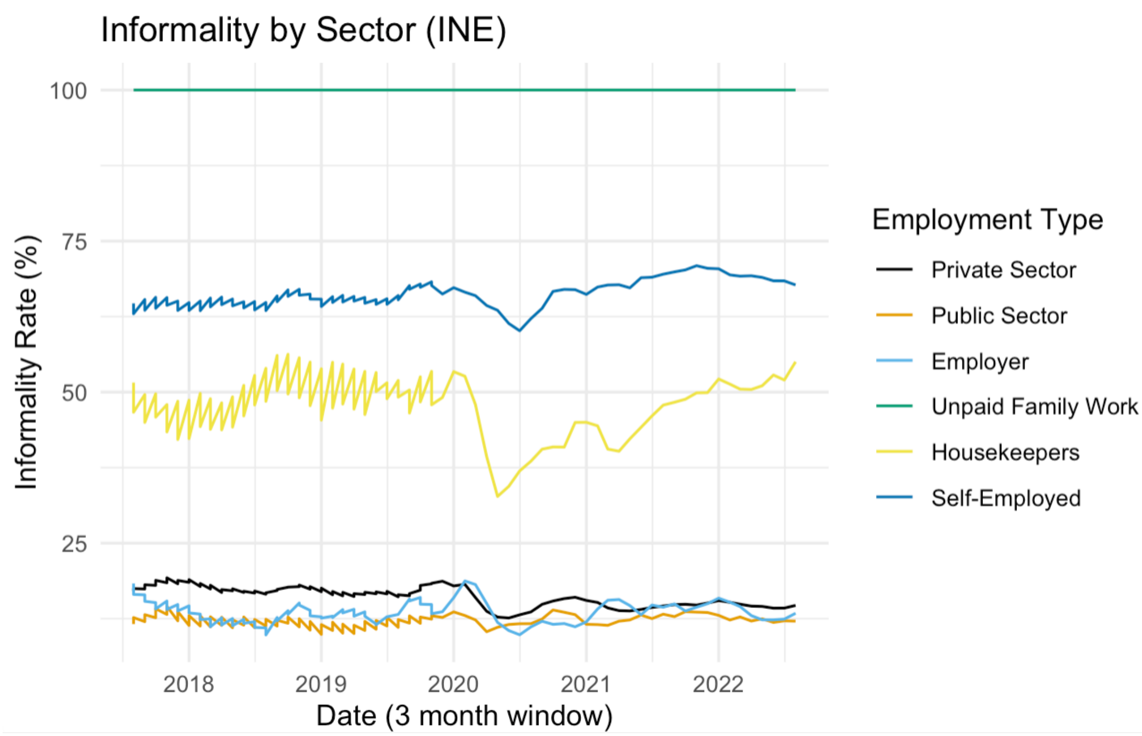
Overall, the insurance scheme aims to be self-funding, reallocating funds from times of employment to unemployment for an individual employee, with some partial risk-sharing with other formal employees. This exposes two important shortcomings of the current system: insufficient coverage for independent and informal workers, which comprise more than a fifth of those who self-classify as employed and are over-represented in the lower deciles of the income distribution (CASEN, 2017) and limited support for matching with higher productivity jobs. See Figures 36 and 37 for the correlations of informality, income and employment type, that are associated with less coverage of unemployment insurance.

Figure 36. Poorer workers are more likely to be self-employed/independent



Source: Authors calculations

Figure 37. informality of work is present in all sectors, but is much higher for the self-employed and house-keepers



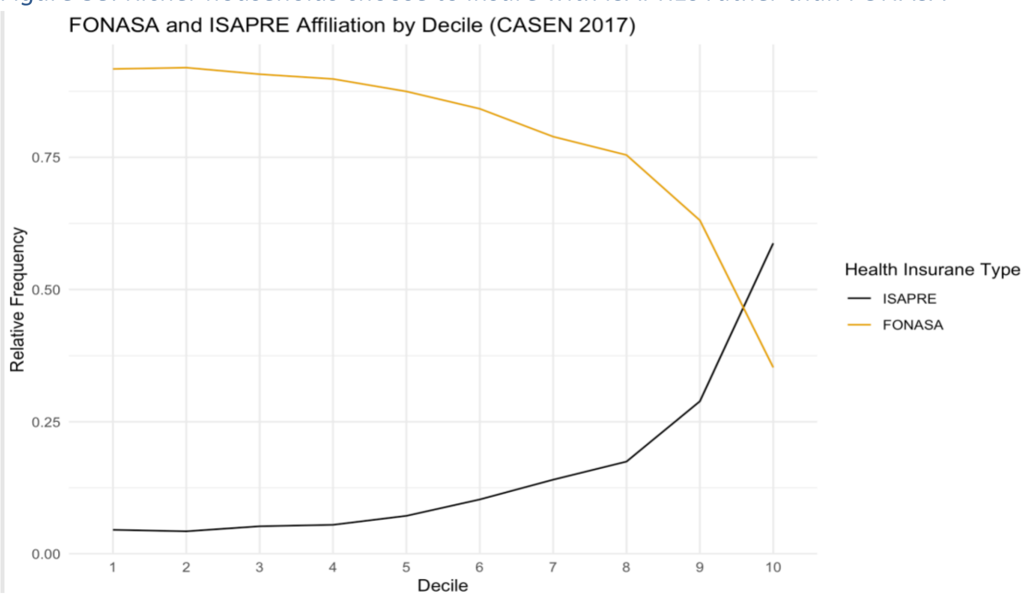
Definition of informality (INE): Informal workers are those who either work as dependents without social security benefits and contributions (health and pensions), are independent workers who similarly do not contribute or receive social security benefits, or family members who work within the household for no pay.

Source: INE, datos abiertos.stat, informal occupation rate.

Health-related risks

Health shocks are a significant source of unemployment or restriction on income-generating ability. These can potentially result in major household level consumption disruptions, especially if the primary breadwinner is affected. Chile's health system is characterized by a public option provided by the government (*Fondo Nacional de Salud,* FONASA), and insurance plans provided by private insurance companies (*Instituciones de Salud Previsional*, ISAPRE). Both are financed by an obligatory 7% of wages, with typically additional costs for private insurance plans. In other words, citizens have been able to choose if 7% of wages goes to a public insurance entity, FONASA, or a private one (any ISAPRE). Citizens who make no choice and have no income record are defaulted into FONASA. The main difference between both services is that the public option is focused on providing low-cost access to publicly provided health services, while ISAPREs generally have specific partnerships with private hospitals. The relationship between income and insurance type is stark, with higher deciles having a clear preference for private insurance options over the public one (Figure 38). The quality of services provided is dramatically different.

Figure 38. Richer households choose to insure with ISAPREs rather than FONASA



Source: Authors calculations from CASEN 2017

Health legislation committed via its Explicit Health Guarantees (*garantías explícitas de salud,* or GES[12]), to provide access, opportunity, financial protection and quality of service for 85 pre-defined families of medical conditions.[13] This guarantee must hold for all health insurance providers, both public and private. *De jure* a large portion of possible health shocks should be met with timely, quality and affordable treatment. The current administration has moved even further to guarantee zero copay to FONASA members in public hospitals, regardless of income. In reality, however, waiting times for non-GES and GES services are an increasing problem in public healthcare services, including specialist consultations which are often a necessary step in order to receive a GES classification.

[12] Also known as Acceso Universal con Garantías Explícitas, AUGE
[13] http://www.supersalud.gob.cl/664/w3-propertyname-501.html

Recent data published by the health ministry paints a worrying picture: average wait time for GES pathologies is, as of June 2022, 157 days, with broad variation across regions, which affects over 67,000 patients. The waiting time for non-GES specialist consultation is on average 478 days, with over 1,700,000 patients currently waiting to receive medical attention. The waiting times for surgery are the longest, with an average wait time of 600 days for nearly 300,000 patients. This has resulted in over 20,000 deaths while waiting for medical attention in the first half of 2021. The ministry estimates around 20% of those deaths were related to the medical condition for which they had previously sought treatment.

This has created two seemingly distinct healthcare systems, with a sharp division around income. In order to provide greater flexibility for patients, FONASA insurance plans do provide partial coverage for services rendered in private hospitals (*modalidad libre elección,* MLE). However, the barriers to service are two-fold: the patient must first receive a "bond" from FONASA for a specific service before seeking attention and there is high uncertainty as to how much the patient will eventually have to pay out of pocket. Although prices for FONASA patients are generally preferential, there is great variety depending on the healthcare institution. The amount of coverage is similarly heterogenous, depending on the type of service provided and institutional pricing. Data from 2017 suggests that bed-days should receive 50% of coverage through FONASA, however pricing practices of private hospitals resulted in effective coverage of somewhere between 2-3%, implying almost all the costs had to be paid by the patient. Thus a patient seeking timelier, higher quality care in a private institution has high uncertainty as to the costs, and might receive a surprise, unpayable bill. The choice is then: face long, uncertain waiting times or expensive, uncertain costs? Such behavioral cruxes are fertile grounds for systemic failures.

ISAPREs, or private insurers generally, have also run into financial problems of healthcare provision to this segmented population. At the time of writing, after a long period of enormous profits, they now face major losses, around $21 million USD in the first semester of 2022. Insurance price readjustments have unraveled owing to ongoing litigation, mostly in favor of patients, and an explosion of medical care provided after the pandemic, including the payments of sick days.[14]

In summary, the evolution of healthcare provision in Chile is similar to other dimensions of provisioning. Access to care has become universal by law, with a quite comprehensive public option that does not require formal employment.[15] However, receiving quality and timely care continues to involve dramatic differentiation by socio-economic status, and the associated capacity to join the private insurance system.

The risks of income insecurity in old age

While old age and retirement is to a significant degree foreseeable, much of the population faces income insecurity in old age. In particular, the predictability of retirement has not facilitated sufficient levels of pension savings. The average replacement rate of Chile's retirees is around 39% of their last salary, with large parts of the population below this (OECD, 2021). This involves a common motif: balancing fiscal expenditure in the future—particularly in the face of a rapidly aging population—and protecting the old from income shocks. The

[14] Another feature of the Chilean healthcare system is that insurers pay out sick days directly to the customer.
[15] FONASA patients who have no reported income cannot opt into MLE to receive private care.

challenge of financing future pensions is partly due to Chile's success in increasing life expectancy. Life expectancy at 65 is 18.8 years for men and 22.1 years for women. If the retirement age were fixed at 65 for all genders (at present it is still 60 for women), the system would need to finance almost 20 years of retirement from 40 years of work.

Chile's current pension system was first established in 1981 and was centered on worker defined contributions set at 10% of gross wages,[16] complemented by voluntary and redistributive pillars. However, the contribution was at first mandatory only for employees hired with no-limit contracts and optional for independent workers. Workers in the informal sector (defined broadly as those without a no-limit contract) were left vulnerable to under-saving for retirement. Legislation enacted in 2019 has made contributions mandatory for independent workers as long as yearly income is four times the monthly minimum wage, which covers the majority of the middle and lower-middle class. Assuming the mandate is effective, this will deliver reasonable replacement rates when real returns to savings funds are sufficiently high. The biggest threats to high replacement rates with self-financed pension plans are thus unemployment spells and informality.

The "voluntary" and "redistributive" pillars have been modified in recent history—most broadly by President Bachelet in 2008, with increased incentives to formality and savings while also giving support for those who are not able to finance "sufficient" annuities on their own. The voluntary pillar gives incentives to increase voluntary savings through tax benefits. These are placed in protected accounts in order to prevent early withdrawals and thus would serve to smooth savings for individuals between times of exceptional high incomes and retirement. Contributions to "voluntary savings" accounts (*ahorro previsional voluntario*, APV) do not require formality and need not be tied to a contract. Although a potentially effective tool to incentivize savings for those who can contribute more than 10% of their before-tax income in savings, many behavioral factors can limit its uptake.[17] The voluntary pillar can help limit public expenditure in pensions for those who have high lifetime income streams, but it cannot serve to ameliorate risks among those lower in the distribution.

The redistributive pillar, on the other hand, provides a minimum pension guarantee (*pensión garantizada universal*, PGU) to all citizens.[18] True to its name, these pension benefits are financed out of taxes and fiscally administered by the government in its pensions reserve fund (*Fondo de Reserva de Pensiones*), that currently has around $7 billion USD in assets. Similar to the policy dilemma faced in healthcare, Chile is able to provide a minimums to all elderly Chileans, but the middle class is vulnerable to a sharp drop in income at retirement due to under-saving. In 2022, someone with no pension savings belonging to the bottom 90% of households would receive $197,000 CLP (around $210 USD) through PGU payments, or around 50% of the minimum wage. Benefits are designed so that higher savings always lead to higher pensions, but the benefit is decreasing in the range between the minimum pension, around $730 USD (~1.7x the minimum wage) until it reaches zero at the maximum self-funded pension of around $1,200 USD (~2.6x the minimum wage) see Figure 39 below.

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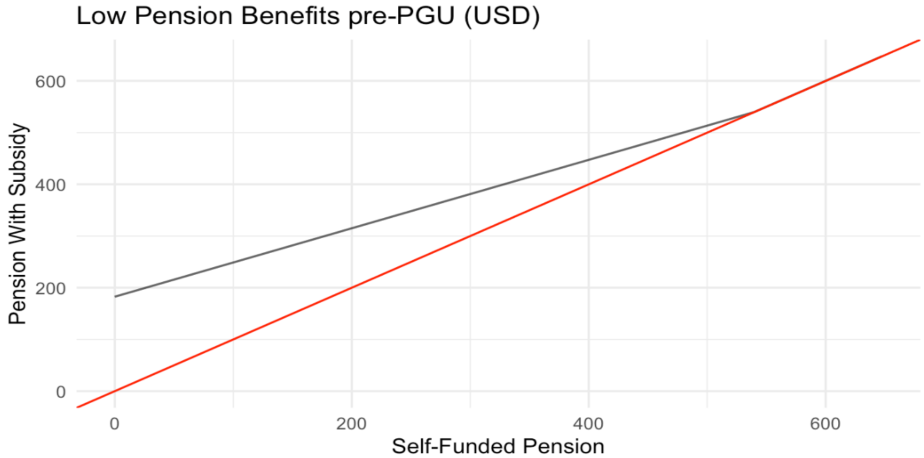
[16] The system for some workers, most notably military and police personnel, continues to be PAYGO.

[17] Dynamic time-preference inconsistencies are well documented in both experimental and behavioral finance literature. See Beratzi and Thaler (2013) for a review.

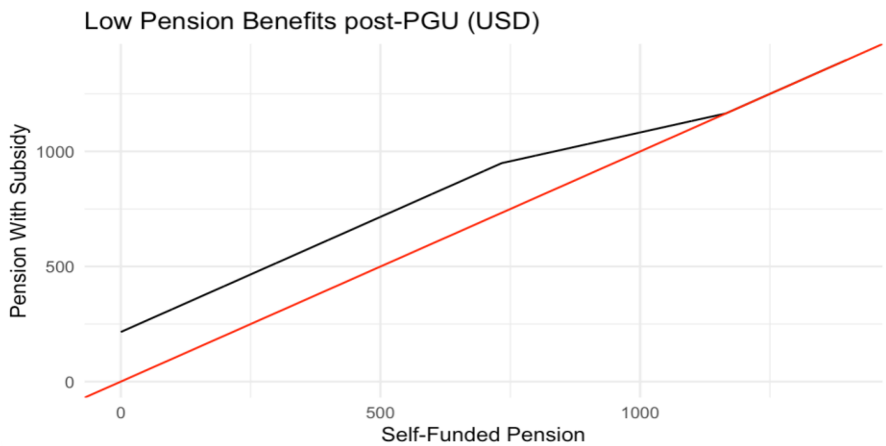
[18] As long as they do not belong to the top 10% of households by income.

Figure 39. The social pension provides some compensation for low levels of self-funded pensions for poor and middle groups

(a) Pre-2022 the social pension provided some smoothing…



(b) …with a substantial further expansion with the 2022 reform



Source: Authors' calculations.

Are private administrators of pensions funds (AFPs) a source of low pensions? Commissions were high for a significant period of the history of fund administrators, but changes in legislation have made all remaining AFPs converge to lower costs. Financial returns have not been extraordinary, but rather consistent and on par with market averages, as legislation regulating their investments intended. A 2005 reform that auctioned new entrants into the labor force to the AFP with the lowest commission rate led to a drastic decrease in administrative costs. The lowest fee AFP currently charges 0.58% of gross income on every inflow (or 5.8% deposit fee) with no fees on total stock held. For future pensioners, the issue of high administration costs has largely been solved, although the structure of commissions could be modified to maintain administrative solvency but increase incentive alignment (with commissions charged over the stock as opposed to inflows.[19])

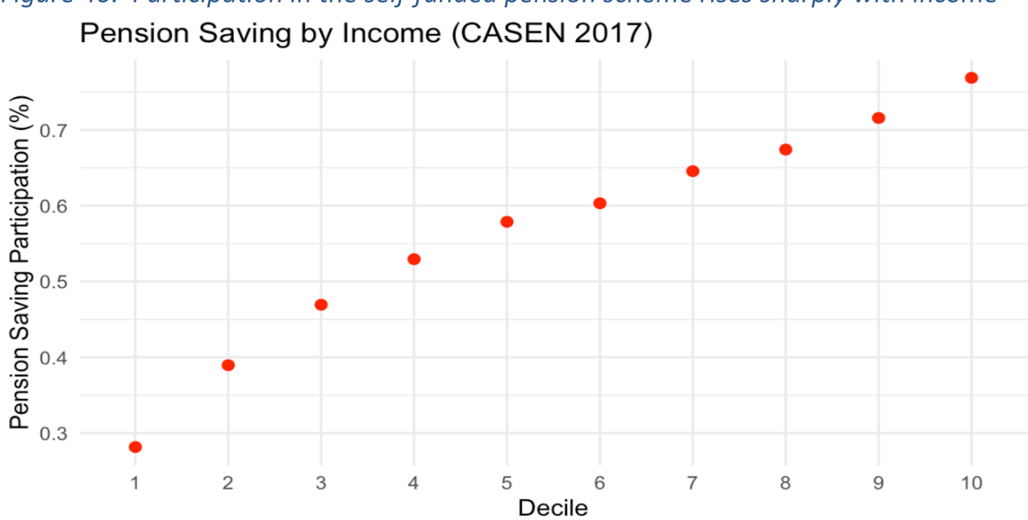
[19] Proposed in the latest pension reform legislation.

A second source of high costs and asymmetric information was the conversion of savings to an annuity. Non-centralized offers, competition in timing, and enormous costs of intermediation by "insurance advisers" could lead to reduced pensions even when the total amount saved was high.[20] The introduction of a more streamlined process lowered intermediation costs and increased transparency, which Morales and Larrain show resulted in around 15% increase in annuity payments (2017).

Ensuring better returns on savings and conversion into annuities, is, however, only relevant to individuals with extensive contribution records. This is irrelevant for those who are not in the formal sector and have no or low contribution density. Folding in independent workers since 2019 was a significant step, but one which will only result in better pensions for this group after many years.

Overall, many good policies have been implemented in the last 20 years to improve the core pension system. It is still too early to evaluate what replacement rates such a system can generate, since they will critically depend on labor market dynamics, returns on investment, and savings behavior. However, the larger challenge lies with the shortfall of a system that is overly reliant on defined contributions: if people do not contribute, either by force or choice, then their pensions will be low. Evaluating the pension system as a whole by only considering the replacement rates of those who have high contribution density. This is highly correlated with income (Figure 40).

Figure 40. Participation in the self-funded pension scheme rises sharply with income



Note: This shows the percentage pension saving participation in any system by household income decile, including those currently unemployed.. The relationship is robust (but shifts the curve upward) if we select only those employed, or those who are non-independent.

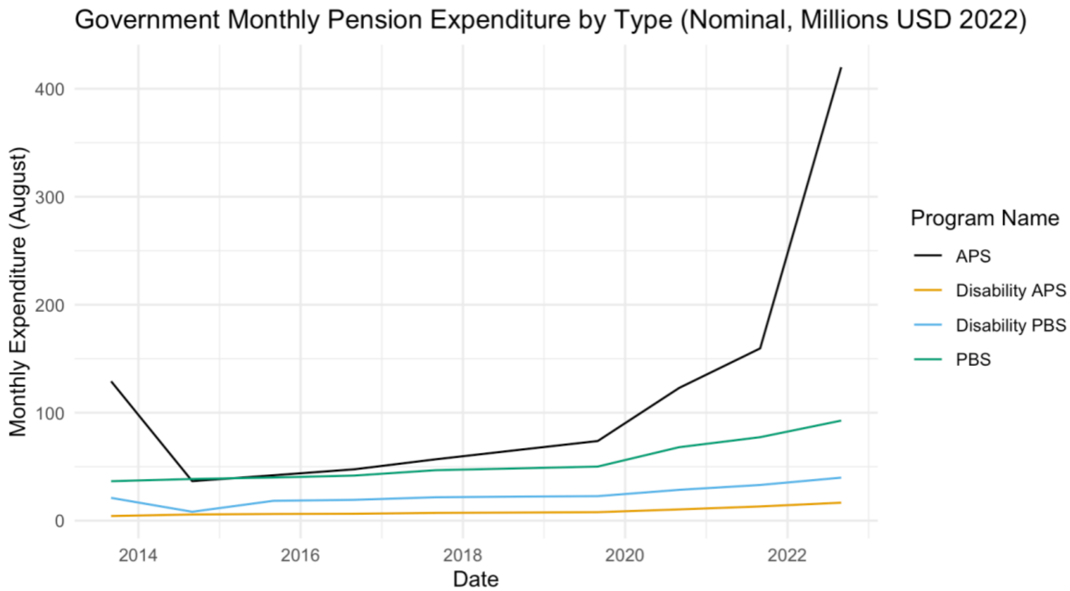
Source: Author's own calculations based on CASEN 2017.

The expansion of the "solidarity" pillar has been a crucial component of increasing effective pensions today, particularly for those who were hurt by the COVID-19 pandemic. The expanded PGU plan will also help in ensuring better pensions for those who are retired or are close to it. The near- "universal" element of the new system is a significant improvement,

[20] In the late 90's the average transaction cost reached 6% of total savings, or 1.8 years of contributions (Morales and Larraín, 2017).

since it might reduce information barriers for retirees who might have been uncertain or unaware they qualified for such a benefit, now the threshold has been relaxed to the bottom 90% of the distribution. While mean testing is often desirable (to minimize inclusion errors), bureaucratic hurdles to targeted benefits can prove prohibitive *precisely* for those it is meant to target. It is important to highlight, however, that the fiscal cost of these plans has been significant. The government subsidy element of the PGU (which we label APS below, following the pre-2022 nomenclature) is the lion's share of government pension spending, and will likely exceed 1% of GDP in the next calendar year (Figure 41).

Figure 41. There has been a sharp increase in total government outlays to support low pensions in 2022



Source: Superintendencia de Pensiones, Ficha Estadística Previsional (2013-2022).

A related challenge is that of the retirees of the future– those who are earlier in their income cycle and have many years of saving ahead. Increases in defined benefit payments, like PGU, come at significant cost and one which might become fiscally untenable given Chile's demographic transition. The contributory pillar, therefore, will continue to play a key role in the pensions of the future, assuming this central feature of the system is maintained. This underscores the need to increase participation in this part pillar. This could involve tackling the thorny challenge of stronger incentives for formality, or linking involuntary contributions directly to the income tax system, as well as ensuring transparency in the administration and investment of pension funds.[21]

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This section assessed one of the central parts of the "post-production" system, the management of individual and household risks. As with other parts of the Chilean system, certain aspects do reasonably well, by international standards, of providing some protection for poorer groups: there is now a universal system of public health provision and a social

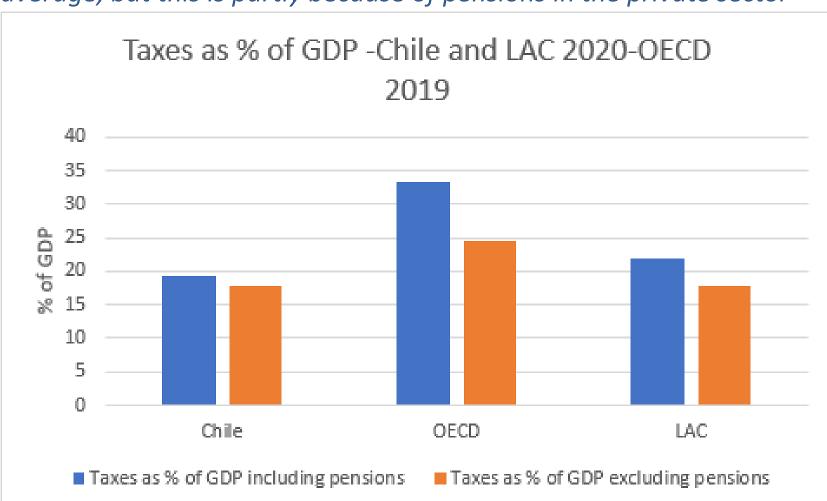
[21] This might have been one of the few unintended benefits of "exceptional" pension withdrawals during the COVID-19 crisis. If citizens were unaware of the amount or behavior of their pension savings, being able to withdraw 10% confirmed that their pension savings stock both existed and was their legal property..

pension, but no coverage for unemployed amongst the non-covered population. However, in other respects it has two features that tend to reinforce or even widen inequalities of wealth and social status. First, to the extent individuals are included in the core unemployment and defined contribution pension system, this is essentially a system of self-insurance rather than risk-sharing; similarly access to decent quality of health services depends on the ability to purchase private insurance. Second, because of the past interaction between contributions and employment status, individuals with a less continuous attachment to formal work end with less or no unemployment insurance and an old age pension with a very low replacement rate. This was further worsened by the policy of allowing individuals to withdraw savings from their pension-funds during the COVID pandemic.

6. The size of the state

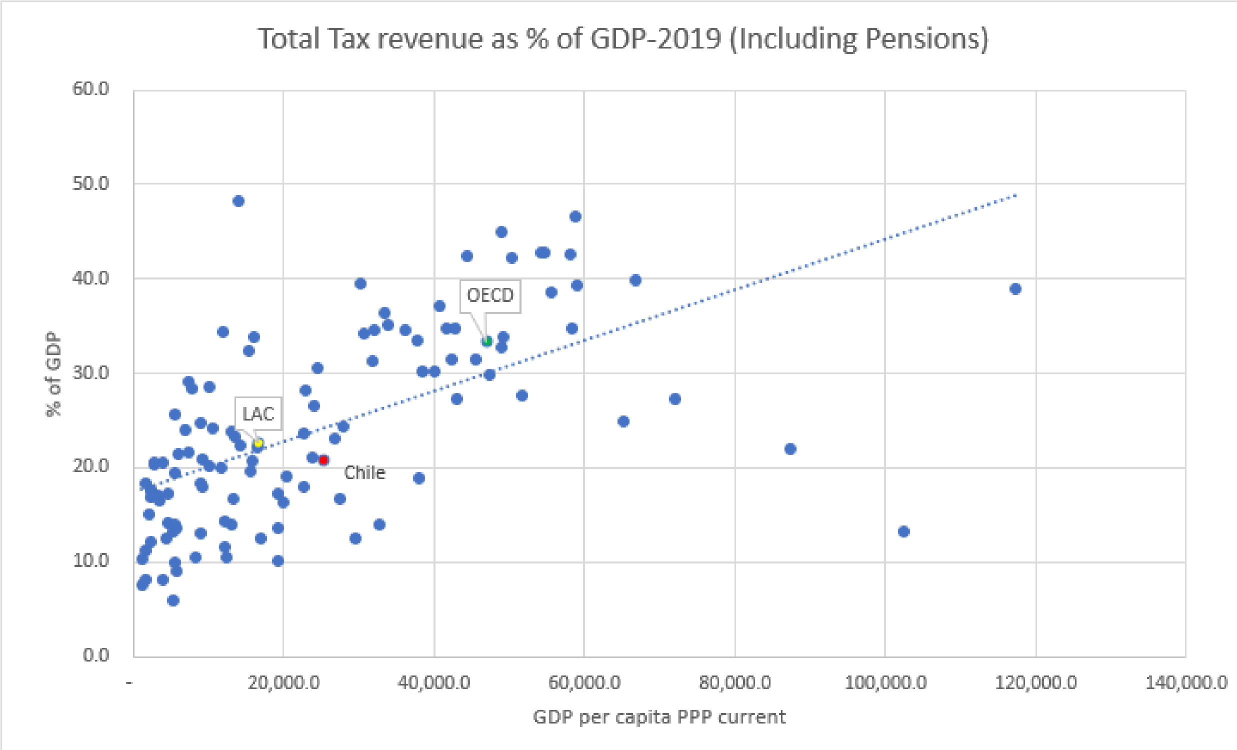
The size and performance of the state is central to all the areas reviewed here, including playing a specific role in any redistribution through taxes and transfers. We first look at size as proxied by taxes, that is a central instrument in the post-production phase, as well as a source of finance for education and other influences on the pre-production phase. Chile has a low tax effort relative to the OECD, but is close to Latin American norms, especially after adjusting for the fact that most of Chile's defined contribution pensions are not classified as a tax. See Figures 42 and 43.

Figure 42. Chile's tax effort in relation to GDP is substantially below OECD and even the Latin American average, but this is partly because of pensions in the private sector

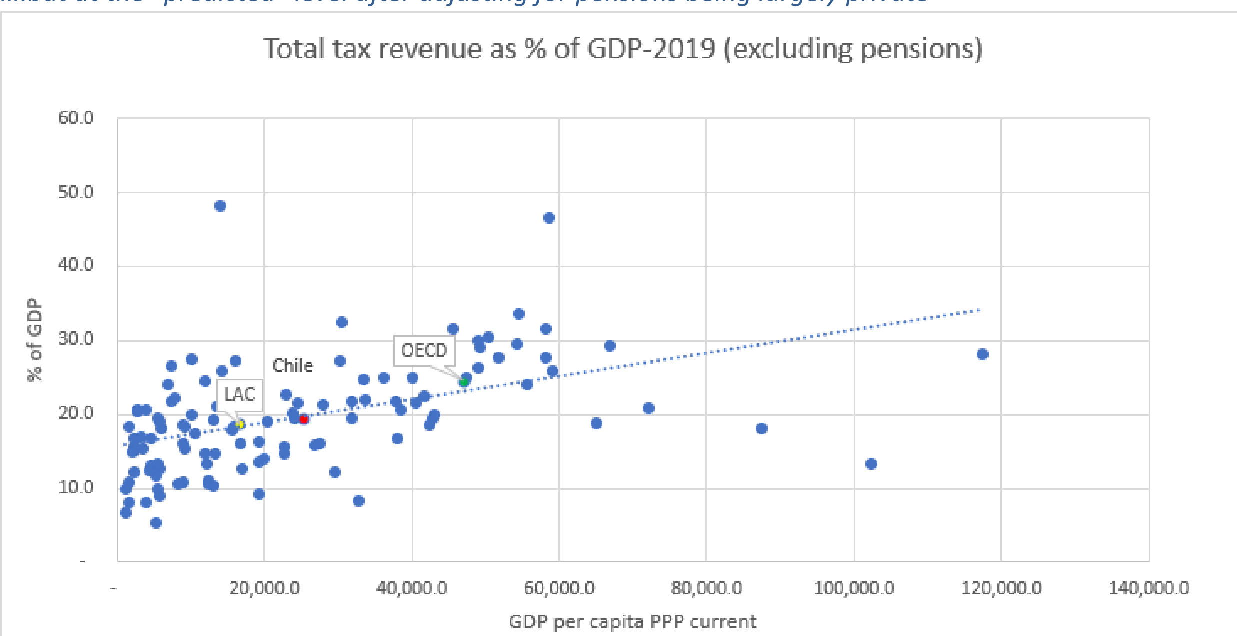


Source: Author's calculation, from OECD 2021

Figure 43. Chile's tax effort in relation to GDP is also low relative to its income level…



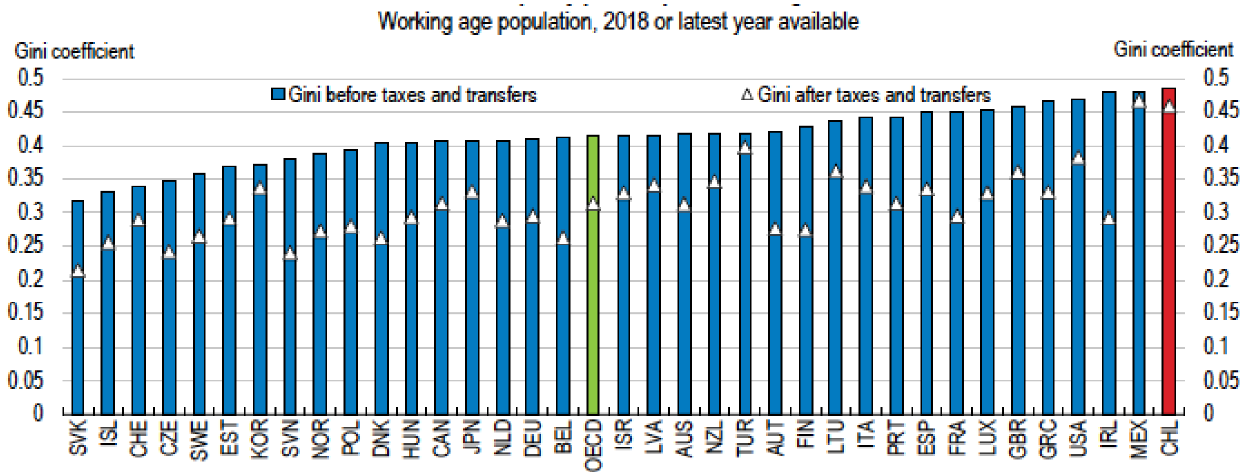
….but at the "predicted" level after adjusting for pensions being largely private



Source: Author's calculations, OECD

However, Chile (and Mexico) is strikingly different from other OECD countries in the very low redistributive impact of taxes and transfers on income inequality (Figure 44). Moreover this is calculated from the CASEN survey that we saw excludes top incomes, especially capital incomes, that are lightly taxed. There is some cross country correlation between overall wealth and degree of redistribution–and Chile is at the lower end of OECD national incomes per capita. However, history suggests that this is only part of the story. Amongst OECD countries, the major push to greater redistribution, including progressive income tax systems and greatly expanded welfare states, occurred in the period from the 1930s through the decades after the Second World War, with only partial reversals, especially on income tax progressivity, during the "neoliberal" period from circa 1980.

Figure 44. Chile's taxes and transfers has only a very minor impact on income inequality compared with other OECD countries



Source: OECD

An increased tax effort, with an overall tax and spending system that is more redistributive without significant costs in efficiency, has to be one part of a more extensive attack on inequality. This has been extensively discussed in Atria and Otero (2021). Chile has the advantage of relatively "strong" institutions, with respect to bureaucratic behavior and formal accountability structures. The challenge is to convert this capacity into effective provisioning for all. Increased resources for service providers is part of the story, but needs also to engage with issues of cultures of behavior and respect for all citizens.

7. So can Chile escape its inequality trap?

The overarching theme of this paper is that inequalities, in many dimensions, are created and reproduced through self-reinforcing influences, that we represented schematically in Figure 1. We have seen how these work through the reproduction of inequalities of capital—education, financial, social and cultural—that are then reinforced through allocations to productive activities, and through unequal mechanisms to manage risks. Countervailing forces—in features of labor policy and state redistribution—are relatively weak, affecting some groups (most importantly the bottom decile) but without changing the broader system. We have also argued that many of the inequalities are also inefficient and tend to reduce growth dynamics, both through specific economic forces and the influence on growth-sapping social conflict, that was so vividly manifest in the protests between 2006 and 2019.

So is there a feasible path out of this inequality trap? It is useful to break this into two questions: is there a coherent policy and institutional path out of high inequality? and is there the potential for political support for change?

Paths of change, and the question of the "model"

Our goal is to provide insights on potential directions for change. This is not a policy design document, that would require a substantial amount more sector and domain-specific analysis. We first discuss one of the elephants in the room: is "the model" the central issue? Chile was an early leader in a "neoliberal" approach. Is inequality a product or cause of a neoliberal strategy?

We first need some to specify what is meant by neoliberalism. This is contested terrain and the term is often used loosely. We suggest the following features:

- A reliance on markets, both internationally and domestically, and a parallel support for private business
- An emphasis on policy and institutional designs that link personal outcomes to individual action, including in social provisioning
- A relatively limited role for the state, in provisioning and direction of economic activity, and extensive involvement of the private sector in sectors that are often the domain of the state, such as social sectors, prisons and infrastructure .

There are strongly held views on whether this is good or bad for development. And it is important to recognize that there were (and are) arguments that the economic and social policies associated with the global shift to neoliberalism would be good for all.

The first idea is that, even if inequalities are high, the pro-market, and pro-business, approach is the best way to generate rapid growth. This supports the expansion in incomes for all, is the most effective way to reduce absolute income poverty, and provides tax resources for social provisioning. This is a version of the "trickle-down" view of development– "a rising tide lifts all boats".

Then there is the further idea that a pro-market approach is actually *good* for equity in incomes and other dimensions of well-being, provided it is associated with broad-based provisioning for human capital and for the management of those risks that individuals cannot manage by themselves. In this view international integration and domestic markets expands opportunities, especially for industries intensive in unskilled and semi-skilled labor (as well as resource intensive industries that provide for higher taxes) (World Bank 1990). Greater use of individual choice and private involvement relieves major constraints of resources and competency in the state.

So how did this work out for Chile, with respect to both inequality and overall development dynamics?

The answer is mixed, in several respects.

First, we have seen that aggregate growth was high in the 1990s, driven by high investment and reasonable productivity growth, and this contributed to absolute income poverty reduction. Private involvement in infrastructure tackled the infrastructure deficit and supported more rapid growth. However, productivity growth then slowed substantially, and we argue that this is partly associated with the prevailing dominance of concentrated market shares in business houses, associated inefficiencies and weak dynamism, a large proportion of very small, and relatively low-productivity firms in the distribution, and relatively small segments of real dynamism in the economic system. This is a manifestation of the inefficiencies of extreme inequalities at the top of the distribution of wealth and influence, sustained also by socio-cultural capital embodied in elite networks. This is far from the ideal of the invisible hand.

Second, Chile to a significant degree diverged from the pure market model. This is vividly seen in the very success that we discussed with respect to absolute income poverty reduction. This was substantially influenced by effective state action in social provisioning, in a variety of transfers. It is also witnessed in the very substantial expansion in education and health services, both of which have a large share of public provisioning, albeit with major issues of low and unequal quality.

Third, the model of linking individual contributions to social benefits–notably in the defined contribution pension system and in the unemployment scheme–was probably one factor in the relatively low proportion of workers in the informal sector by Latin American standards (at "only" about a third). However, this not only mechanically reproduced initial inequalities (you got out what you paid in), but more importantly meant that individuals with a weaker attachment to permanent work ended with low contribution densities (and no unemployment entitlement) and so low replacement rates for old-age. This was worsened by inefficiencies in the private AFP and annuity system, especially in the early period. Similarly, the system of individual choice in schooling tended to reproduce and not reduce inequalities.

Overall, arguments for or against the current system as a binary choice (for or against the model) are misleading and a distraction from real debates. We see the implications of the analysis here differently. Substantial policy shifts are desirable, but there is no simple radical shift to an alternative model that will tackle inequality whilst supporting overall growth and development. Rather we see a more complex message.

On the one hand, in each area reviewed here, there are directions for policy and institutional change that can contribute to shifts to a more equal (and efficient) development path. To give some examples, this would include:

- Implementation of the deep (ongoing) reforms to tackle education quality, especially in municipal schooling, also in parts of the university system, combined with a financing system that begins to level the playing field
- Strengthening anti-competitive policies to reduce monopoly rents associated with market concentrations in the corporate sector, combined with support for dynamic parts of the system, especially in the growth of small and medium businesses and the start-up sector
- Tackling gaps and biases in the risk management systems, for example in both interim measures to support pensions and, over the long-term, linking pension contributions administratively to the tax system rather than the employment contract; similarly both providing more support for the basic health system while taking away the financial incentive to shift to the private system
- Maintaining labor policies that bring some modest redistribution (such as minimum wages) in line with market conditions, and tackling more problematic areas around permanent vs temporary contracts that

- Significant increases in the level and progressivity of taxation, including on capital and estates, with the goal of shifting Chile toward the position of richer OECD countries with respect to the size and redistributive capacity of the state
- Deepening reforms of state service provision (in the spirit of *Chile Atiende*) to make the state responsive to citizen needs and less opaque—including in support for the police system—especially exploiting the significant civil society activity to find innovations that work and can be scaled through government.

None of these areas are easy, most have ongoing policy design efforts, and all involve contested views. They are sketched here to make a broader point. While inequality is not a simple product of one "model", it does need to be viewed in terms of complex system functioning, in which economic incentives interact powerfully with structures of social difference, connections and behaviors, that is with the structure of social and cultural capital. This implies both a need for a strategic shift that would have multiple elements, explorations and adjustments, and recognition that in any policy or institutional domain there are likely to be specific self-reinforcing patterns that will need to be tackled.

Are there historical models of societies that have successfully introduced the complex and diverse set of policies and institutional changes to both tackle inequalities and foster long-term development and growth? This is in fact a central feature of transitions of now-rich industrialized countries in the OECD. This was vividly the case in the United States, initially in the sequence of measures introduced in the Progressive Era early in the early 20th Century (including anti-trust policy, labor policy, food and safety regulation and the introduction of the federal income tax), the subsequent major reforms in the New Deal in the 1930s, including social security, and a further, and ongoing round of reforms in the post-war period. Parallel histories of inequality-reducing (across many dimensions) were features of the birth or expansion of social democracy in Scandinavia and the UK starting in the 1930s, and in most of Europe after the Second World War.

As noted in the introduction, there was then an anti-government pushback from the Reagan era (with indeed a neoliberal ideology), and this was associated with reversals of the inequality gains, and a further more recent counter reaction. But the point here is that large, complex policy and institutional changes, that reduce inequality can and do occur. These have involved strategic shifts across multiple areas, typically with substantial policy exploration over many years, that do effectively amount to system-wide changes in mindsets, rules and practices. Moreover, it is often argued that these were part of "saving capitalism", and, in more development terms, we could suggest they allowed these societies to break out of ***their*** middle income traps.

Can change be politically supported?

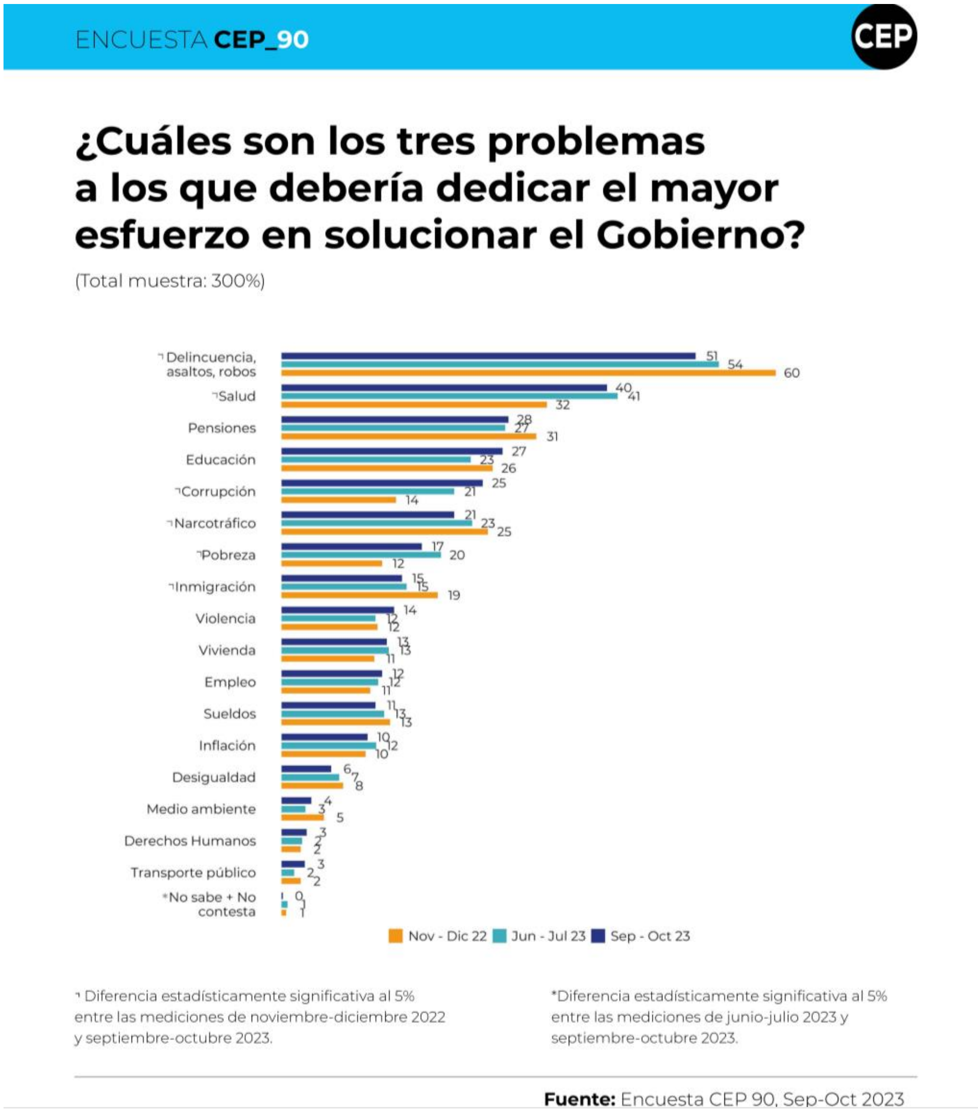
Substantial shifts in policy and institutional designs require substantial political support. The major transitions just cited in the United States and Europe occurred in the context of major political realignments. The Progressive Era policies happened in the wake of populist movements for change, "muckraking" journalism that helped shift the narrative, societal revulsion over the super-rich "robber barons", interacting with specific features and personalities of political and judicial elites. The emergence of social democracy in Europe in 1930 was in response to major societal conflicts (including in Scandinavia!), as well as the

Great Depression, when the alternative political resolution was fascism. The trauma of the Second World War and the centrality of working classes (and African Americans in the United States) in fighting armies. In the UK this spawned the implementation of the Beveridge Report—written in the war—and a narrative of a "New Jerusalem" in the emerging social democratic order.

When this project started in the first half of 2022, there was a plausible case for Chile being in a comparable political juncture, after some 13 years of protest, that culminated in the extraordinary *Estallido Social* of 2019-20, and the subsequent 2021 election. The empirical work of the first paper (Lecaro et al 2023) supported the view that the issues raised on the street represented very broadly felt concerns across most strata of society.

The trajectory of change is, however, never linear. By 2023 it seemed as if much had changed in terms of political preparedness for extensive change. COVID-19 happened, along with lock-downs. The first attempt at a revised constitution was rejected in a referendum. The underlying polarization of views—a vivid feature of the 2021 election--continued to be reflected in formal political processes, for example with the Congress resisting proposed tax reforms. At the same time public concerns shifted toward preoccupations with a rise in violent crime. As Figure 45 illustrates, in 2022 and 2023 citizen surveys indicated that the strongest societal demand on the government was to tackle delinquency, assaults and robbery, while "inequality" is way down in expressed concerns.

Figure 45. Citizen surveys in 2022 and 2023 put delinquency, assaults and robbery as the top concern

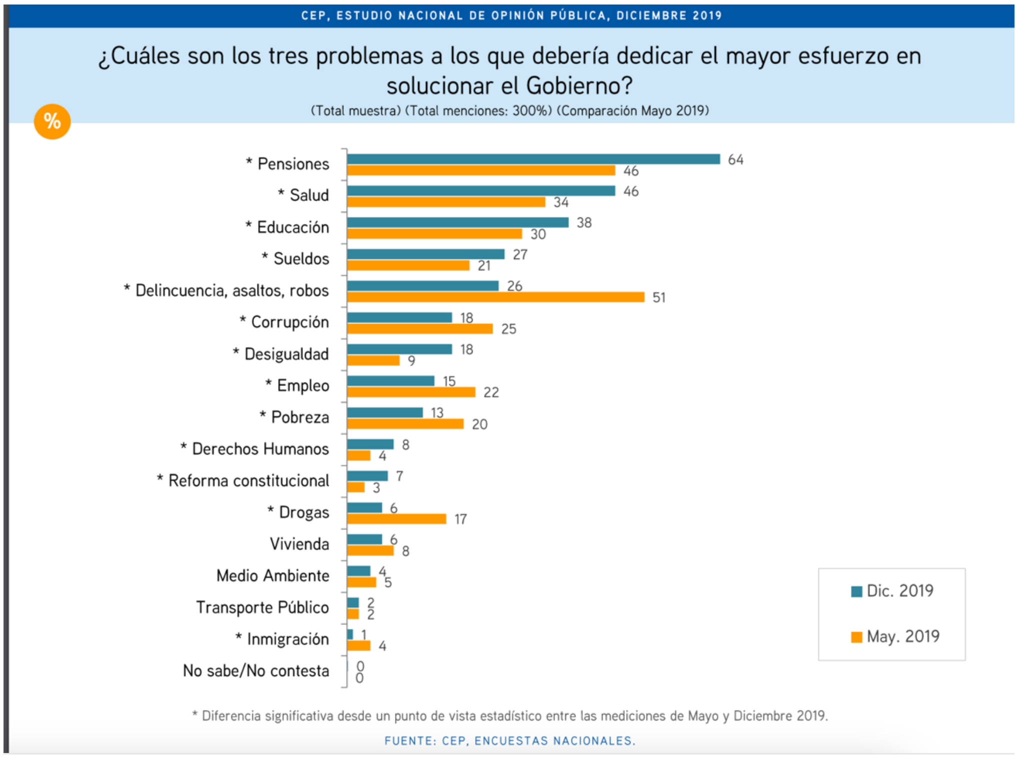


Source: CEP

Does this all mean the moment for significant policy action has passed? This paper is basically concerned with long-term processes and structural features of Chile. However, we have two perspectives on the 2022-23 developments.

First, "inequality" as an abstract concept was never high on expressed concerns. Rather a theme of this and the companion paper is that citizens do have expressed concerns over the manifestations of entrenched inequalities. This is borne out by comparable surveys in the height of the protest in 2019 (Figure 50). Pensions, health and education are in the top four surveys in both periods, while incomes and corruption also are high in both.

Figure 46. ...but pensions, health, education and corruption had similar salience in 2019



Source. CEP

Second, a common feature of political narratives throughout the world is the linking of a concern with "law and order" with a small state, pro-business, pro-market narrative ("neoliberal" if you like). While this project did not include a focus on violence or law and order, we would argue that this linkage is often precisely wrong. Poorer and middle class groups almost always bear the brunt of violent assaults and are keenly concerned with governmental responses. In many countries (notably the United States) there are strong grievances against police behavior. However this is a case for reforming the state services not withdrawing. Chile starts from a somewhat better position than the US—with the important exception of the emergence of abuses around the *Estallido Social*—the survey evidence indicates that Chileans have *more* confidence in the police (*carabineros*) than most other parts of the state (see data in the first paper). There can be very different views on how to reform and strengthen police services, but that is a separate issue.

In sum, there are significant parallels between the depth of social conflict and the social awareness of the need for change in Chile, and comparable moments of system-wide, equalizing changes in the US and Europe in the 20th Century. And as in those moments there is substantial resistance, in terms of interests, ideology and narratives. This is intrinsic to the nature of an inequality trap. How this will resolve in the coming years is hard to predict and there is nothing automatic. The more recent international experience on "right wing" populist, and often ethno-nationalist movements, indicates that these can take forms that are costly for societal development and inclusion. This only reinforces the importance of both open debate and systematic analysis.

8. Conclusion

This paper and its companion (Lecaros et al 2023) seek to understand the nature of inequality in Chile. An overall assessment would be along the following lines. Chile has profound problems embedded within a socio-economic system that is highly unequal. The extraordinary system of protests, from around 2006 to 2019, was led by younger and more educated individuals, but was essentially right in the sense that it reflected deep discontent across almost all parts of the population (Lecaros et al 2023). Moreover, in terms of identifying problems it was also to a large extent right on many aspects of the nature of the problems, in inefficiencies within the business sector (of which collusion was only an extreme symptom), of poor quality in provision in education and health and beyond, and resentment that quality services were the preserve of richer households, in a pension system that left much of middle class retirees with very low incomes, and in concerns over discriminatory or humiliating treatment at the hands of state actors or elites.

Some features of the "model" and associated designs were consequences of high levels of inequality, and served to perpetuate inequalities. However, the more important causative influences are on the *interaction* between entrenched inequalities across wealth, human capital, social networks and culture (the many "forms of capital") and markets, the state and policy designs. In any case Chile, especially since the 1990s, has been far from a pure neoliberal paradigm. In summary, entrenched inequalities meant the system responded to the "neoliberal", and other, policies in ways that tended to reproduce inequalities, without compensatory gains in aggregate welfare in the trickle-down view of the world. This is why we have characterized Chile as being in an "inequality trap".

In some cases policy designs facilitated continued entrenched inequality, but, income poverty measures apart, the "failure" was rather the absence of more concerted action to tackle sources of inequality. There has in fact been a sequence of specific reforms, across administrations, that seek to tackle the problems discussed here, whether in business regulation, education finance and management, pension design and more (for summaries see for example the substantial checklist of recommendations and actions in the OECD reviews of Chile's performance, e.g. OECD 2021).

Chile has been on a roller coaster, from the 2019 protests, the COVID pandemic, the 2022 election that seemed like a demand for real change, the rejections of two proposals for new constitutions, and at the time of writing, a shift to heightened concerns over crime. However, the problems associated with the multiple dimensions of inequality remain present and will come back to the forefront. Many of the key specific concrete issues—over pensions, health, education and corruption—continue to be high on expressed citizen concerns.

This paper hasn't sought to develop specific policy solutions. This is a much larger task, and is in any case the role of specialists in the variety of policy domains. While general policy directions have been suggested in the areas reviewed, the core purpose is rather to develop the argument that concerted action to tackle entrenched inequalities is fundamental to Chile's long-term development. There is no panacea. Favorite domains for action–more education, progressive taxation and more–have a role to play, but need to be part of a comprehensive, and multi-faceted approach, that includes reforms to many parts of the social provisioning system, the functioning of the state, inefficiencies within a concentrated business sector, the creation of economic opportunities for decent jobs, and broad-based access to all levels of entrepreneurship.

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