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Structural transformations and the lack of inclusive growth

The case of Chile

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Abstract: This paper describes the structural transformations that Chile has experienced in the last 50 years and how they have contributed—or not—to inclusive growth and genuine economic modernization from a historical perspective. The empirical analysis of the paper shows a premature deindustrialization process since the 1970s, continuing to the present. We observe in the transition from the import-substitution industrialization strategy to the outward-oriented neoliberal model of high inequality, a decline in the value-added shares of manufacturing and agriculture and a rise in services (mainly financial services, insurance, and real estate) with ups and downs in mining shares. These trends are more emphasized in employment shares, with the decline in relative employment generation in agriculture and manufacturing going directly to the services sector that now accounts for two-thirds of total employment in the economy. The trend of persistent deindustrialization and high inequality is worrisome and could negatively affect Chile’s ability to achieve structural transformations towards higher and more sophisticated levels of productive development and technological advancement.

Keywords: Chile, deindustrialization, inclusive growth, inequality, structural transformations

JEL classification: L16, L52, N1, O14, O25

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1 Introduction

Chile is often portrayed as a showcase of sound economic management, rapid growth, macroeconomic stability, export-orientation, and liberal rules for foreign direct investment. The neoliberal model implemented in the last four decades suffers several shortcomings, such as a tendency towards deindustrialization, strong dependency on natural resources, high inequality of income and wealth, and environmental fragility led by resource-intensive growth.

The structural transformation undertaken by Chile, which we analyse in this paper, in the last five decades has been related to rapid trade liberalization and absence of industrial policies, along with extensive privatization and deregulation extended to both the productive and social sectors (education, health, pensions, social housing). Although the naked neoliberalism of the Pinochet era (1973–89) has been somewhat tempered since the early 1990s by more public investment in the social sectors, infrastructure, and regional development, the bulk of the economic model put in place in the Pinochet years remains in place today and, lately, has provoked serious social resistance. In October 2019 an unexpected wave of acute social unrest developed that seems mostly associated with widespread dissatisfaction with the regressive features of the Chilean economic model, primarily inherited from the dictatorship period.

Chilean economic growth relies, on the demand side, on the dynamism of exports, private investment, and private consumption; on the supply side it relies on the mining and services sectors. Besides copper exports, Chile has developed an important agro-industry export sector in winery, fruit, fishmeal, and forestry-related products. However, in spite of a rising GDP trajectory, the country has undergone a steady process of deindustrialization, with the share of manufacturing in gross domestic product (GDP) reaching a historic low of 10 per cent in 2018, a level resembling that of the early 1930s at the outset of the Great Depression. In contrast, in 1972 manufacturing was 26 per cent of GDP (Lüders et al. 2016).

Social indicators show a mix of declining poverty along with persistent inequality of income and wealth, with high asset concentration within powerful economic elites. The Gini coefficient for both monetary incomes (adjusting for transfers) and net wealth places Chile as the second most unequal country in Latin America (OECD 2018a) and among the top 10–15 most unequal countries in the world (Solimano 2016). In turn, the income share of the richest 1 per cent of the population captures nearly 33 per cent of national income—a very high figure by international standards (López et al. 2013).

The Chilean growth model has relied on the rapid growth of natural resource-intensive and environmentally degrading industries to the detriment of knowledge-intensive and high-skill sectors. Resource-intensive growth has come at a high cost for the environment, particularly in terms of air and water pollution. Large emissions are generated by the mining sector, with important health impacts for the population (Solimano and Schaper 2014). Being an energy-intensive activity, mining is also particularly pressed by energy scarcity, as the country happens to be highly dependent on fossil fuel imports. Water demand exceeds supply in the northern and central parts of the country, where most of the water-intensive mining and agricultural activities are located, with surrounding communities often lacking sufficient water supply for consumption.¹

¹ Taxes have been too low to cover externalities created through local air, land, and water pollution, and fossil fuels are not priced in line with their carbon content and local externalities. The large number of industries that intensively use or extract natural resources (aquaculture, fisheries, forestry, etc.) and/or are environmentally dirty (pulp and paper,

In this context, investments in natural resources and environment-intensive sectors have remained very attractive, thanks to large natural resource rents (the difference between actual profits and the opportunity cost of capital). Chile also has a service sector that has developed around banking, private pension funds management linked to privatized social security, commerce, and shopping malls in a consumer-oriented society. Also, the real estate sector has been boosted by the existence of a deep market of mortgage loans of long maturity and a generally moderate real interest rate that has encouraged active demand for housing and commercial real estate.

The Chilean growth model includes plenty of contrasts. On the one hand, Chile spends little on research and development (R&D) compared to most (advanced) OECD countries, characterized by an increasing share of high-skill and technology-intensive activities in GDP. Also, its productive structure is intensively focused in natural resources with low value-added. However, a high degree of financial deepening (oriented to finance the real estate sector and durable consumption) positioned the country closer to developed country patterns, but without much productive development. The Chilean economy is still sensitive to terms of trade shocks due to its resource dependency, although sovereign/stabilization funds put in place in recent decades have ameliorated adverse terms of trade and other foreign shock effects. The recessions of the late 1990s and late 2000s were far milder than the big contractions of the mid-1970s and early 1980s (Solimano 2020).

This paper describes the structural transformations that Chile has experienced in the last 50 years and how they have contributed—or not—to inclusive growth and genuine economic modernization. For this, we will analyse the indicators of sectoral production, employment, and productivity, together with data on poverty and inequality based on the UNU-WIDER World Income Inequality Database (WIID) (WIDER forthcoming). The second part of the paper examines the political economy and public policies that have influenced those structural transformations and the future trajectory of structural transformation, employment, and inclusive growth.

2 Economic history prior to c.1970

Historically, Chile has been reliant for its development process on nitrate, copper, coal, and gold, along with agricultural products such as wheat. Two long cycles of commodity dependence can be distinguished: the nitrate commodity cycle (mainly exploited by British companies and financed by British banks) from around 1880 to the early 1930s, and a copper cycle (dominated by US companies) that started in the 1930s when copper replaced nitrate as the main export commodity, mainly directed to the American market. In the early 1970s, large foreign copper corporations were nationalized. Nowadays, the share of copper in total exports remains close to 50 per cent, but its contribution to fiscal revenues has diminished.

Early in the twentieth century (1900–20), nitrate exports accounted for 65–80 per cent of total exports and nearly 40 per cent of GDP (Sunkel and Cariola 1982). Moreover, nitrate taxes funded nearly 50 per cent of total public expenditure. In the late 1920s and early 1930s, the boom in Chilean natural nitrates came to an end after Germany developed synthetic nitrate at a lower cost. As a consequence, Chilean production of nitrate declined by nearly 75 per cent between 1928 and 1934 (Lüders et al. 2016), prompting a serious economic and social crisis in the country (output

chemicals, steel, copper, etc.) are mostly exempt from paying royalties and/or environmental taxes (with the exception of a specific tax on mining established in 2005).

decline, high unemployment, and poverty) that was then further exacerbated by the effects of the Great Depression.

The Great Depression that originated in core economies hit the Chilean economy very hard. After a complex recovery starting about 1933–34, the country switched in the early 1940s from a commodity-export-oriented growth pattern to an import-substitution industrialization strategy (ISI) that aimed to reduce external economic dependence. New industries in the energy, iron and steel, sugar, and telecommunications sectors were created by the publicly owned development corporation, CORFO, as part of the industrialization effort (Solimano 2020).

However, in the 1950s and early 1960s, Chile suffered chronically high inflation, currency instability, and labour unrest, with distributive conflict looming large. The policy of import substitution, common in most Latin American countries, increased local productive development but could not isolate the country completely from the effects of external shocks and foreign capital dependency. The size of Chile's domestic market—unlike those of Brazil, Argentina, and Mexico—did not allow for effective development of capital-intensive industries such as the automotive and heavy machinery industries (French-Davis 2018). In spite of this, by the end of the 1950s the manufacturing industry represented around 21 per cent of the Chilean economy.

In the period 1950–70, the share of exports in GDP declined substantially and fluctuated between 7 and 9 per cent. Copper incomes in that period represented 55–65 per cent of total exports and 15–30 per cent of total fiscal revenues. Copper mine ownership was a contentious issue as Chile tried to recover the copper sector for the state. In the 1960s, copper mines were 'Chileanized', a scheme of mixed property between the Chilean state and American companies. In 1971, under the Allende government, copper mines were fully nationalized with the support of all political parties from both the left and the right wing. After the military coup of September 1973, although copper nationalization was not legally reversed, the copper sector experienced *de facto privatization* through policies that encouraged faster growth in private copper mining than the expansion of publicly owned mines, whose share in total copper production steadily declined in the decades thereafter.²

3 The developer's dilemma in Chile: an overview

The developer's dilemma relates to how countries manage the tension between structural transformation and inclusive growth. The former refers to shifts in employment between and within sectors to higher-productivity activities essential for economic development. The latter involves spreading the benefits of growth broadly. Economic growth led by structural transformation is more likely to be sustained in the medium term in a way that commodity boom-

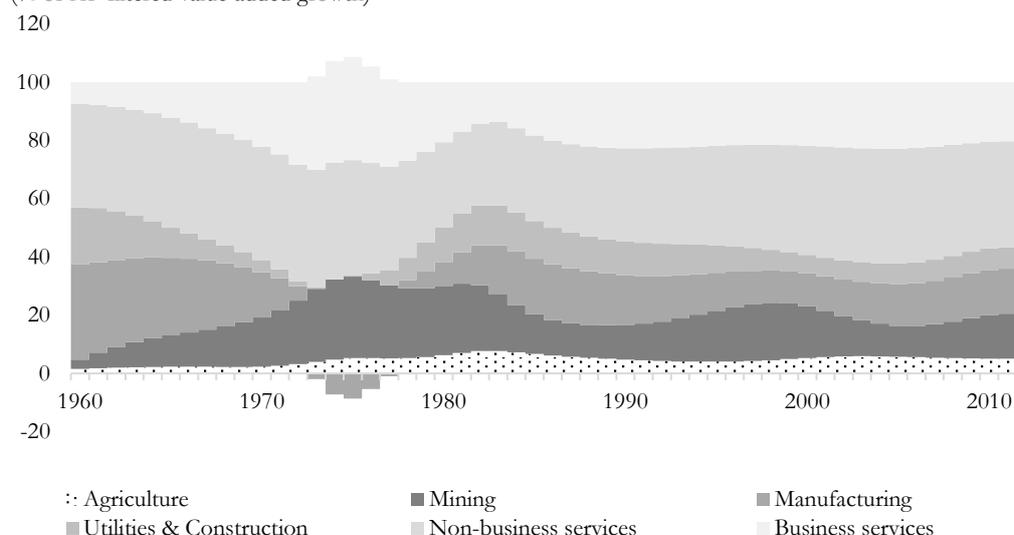
² In order to promote overseas investment in Chilean mining, the military junta approved corporate-friendly supplementary legislation known as the 'Organic Law of Mining Concessions (1982)' and the 'Mining Code (1983)'. The history of mining sector legislation since the military regime included Decree Law 600, established in 1974 and still in effect today, that allows unlimited repatriation of profits by foreign investors and the option of an invariant tax structure to investments made under this regulation. Tax invariability and loopholes have made Chile one of the most internationally attractive mining destinations for foreign investors. In response, foreign direct investment in mining started to pick up a few years *after* the return to democracy (rather than during the period of authoritarian rule itself). The post-Pinochet governments have maintained, on the whole, the mining legislation enacted by Pinochet. In 2005, after extended political discussion and lobbying by the private mining companies (national and foreign) a specific mining tax (SMT) was passed into law. The SMT taxed profits rather than the value of sales or physical production, as is the case of traditional royalties (Solimano and Calderon 2017).

led growth is not (Herrendorf et al. 2014). This is not least to avoid a growth slowdown or a contested ‘middle-income trap’ (Eichengreen and Gupta 2013).

The pattern that Chile has followed since the second half of the twentieth century does not seem to be guided by this type of structural transformation. The growth has been mainly led by the strengthening of the services sector at the expense of the manufacturing sector. Services are labour-intensive, but have low productivity since they do not require significant investments in physical and human capital. On the contrary, the development of the manufacturing sector is linked to a more sustainable type of growth, high productivity, and job creation. As shown in Figure 1, in the early 1960s the manufacturing sector contributed more than 30 per cent of economic growth, much like the contribution of non-financial services. Other industries, such as utilities and construction, generated 19 per cent of the growth, while mining contributed only 4 per cent. What followed was a very rapid decline in the role of the industrial, manufacturing, and non-manufacturing sectors, together with the scaling up of the impact of financial and non-financial services and mining. By the mid-1970s, the contribution of manufacturing to value-added growth was negative, while financial, non-financial, and mining services accounted for 90 per cent. After a gradual upturn of the contribution of the manufacturing sector to economic growth, which reached 19 per cent in 1986, it turned to a downward trend, reaching 15 per cent in 2011. In the rest of this paper we will discuss the potential causes and policies undertaken that have not apparently contributed to growth-enhancing structural transformations.

Figure 1: Growth decomposition by sector, Chile, 1960–2011

(% of HP filtered value-added growth)



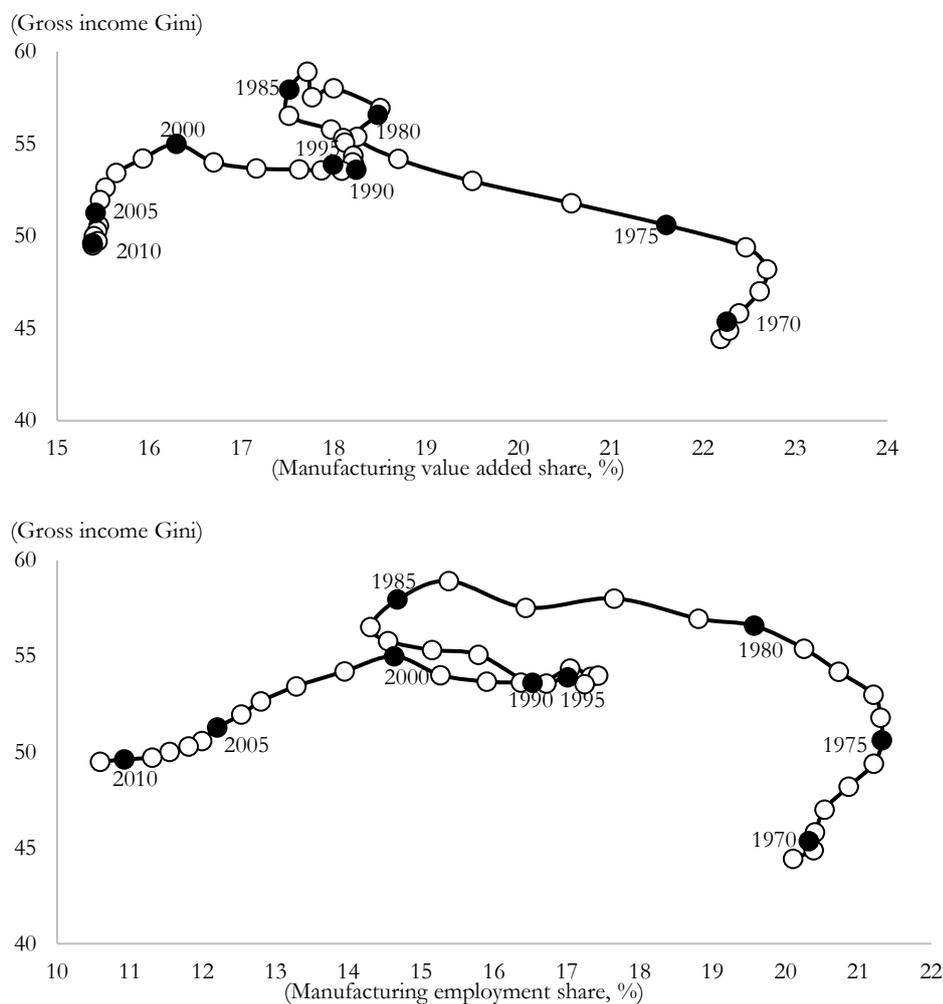
Note: business services: financial intermediation, renting, business activities; non-business services: (a) wholesale and retail trade, repair of motor vehicles, motorcycles, and personal and household goods, hotels and restaurants, (b) transport, storage, communications, (c) public administration, defence, education, health, social work, and (d) other community, social, and personal service activities, and activities of private households. This note applies to Figures 3, 4, and 6.

Source: authors' creation, based on Timmer et al. (2015), GGDC 10-Sector Database, version 2015.

The second part of the developer's dilemma refers to the degree of inclusive growth. Undoubtedly, in Chile, economic growth has been linked to a sharp decrease in income poverty, particularly since the 1990s. Inequality, on the other hand, has proved to be more structural and persistent. Since structural transformation is strongly connected with changes in the manufacturing sector, we plot gross income Gini against the value-added manufacturing share in constant prices (Figure 2a) and the manufacturing employment share (Figure 2b). We distinguish four periods, which are linked to historical and political developments in the economy and society. The first period, before the

dictatorship (up to 1973), had the lowest inequality along with a rising manufacturing share. The second period, during the dictatorship (1974–89) that saw great social and economic changes in Chile, coincides with the debt crisis of the 1980s and the subsequent recession. In this period, inequality increased strongly and the decline of the manufacturing industry began. Although there was a small decline in the levels of inequality during the second half of the 1980s and until the end of the dictatorship, the first decade in the post-Pinochet democracy (1990–99), our third period, is marked by growing inequality and sustained economic growth that extended until the Asian crisis. This external crisis hit Chile due to its dependence on international trade with Asia. Lower growth rates and declining inequality accompanied the beginning of the new century (2000–11), our fourth period. During this period, the downward trajectory of the manufacturing sector has remained steady, measured through both the share of value-added and employment. These sub-periods will be used in the rest of the paper to discuss policies and developments that have limited effects on inclusive growth and structural transformation.

Figure 2a: Gross income Gini and manufacturing (a) value-added share and (b) employment share, Chile, 1968–2011



Notes: (1) The missing Gini coefficients were calculated using linear interpolation. See Figure 10 for the original data. (2) Manufacturing value-added and employment shares are five-year moving averages. For example, the data for 1975 is an average of data for 1971–75. See Figures 3 and 4 for the original data.

Source: authors' creation, based on Timmer et al. (2015), GGDC 10-Sector Database, version 2015; UNU-WIDER (forthcoming).

4 Trends in structural transformation

A key component of structural transformation (ST) refers to the evolution of different productive sectors in the economy, measured by changes in sector shares of GDP, labour, and exports. Particularly, we define ST as the reallocation of economic activity between and within sectors towards higher-productivity activities (Herrendorf et al. 2014). The movement of labour to more productive activities is a driver of economic development as it increases overall productivity and efficiency in the economy. However, policy-induced labour reallocations can also reduce growth when labour is transferred from higher- to lower-productivity sectors (McMillan and Rodrik 2011), as has been observed in some periods in Latin America and elsewhere.

Developed and developing countries have had different patterns of ST. While developed countries shifted, historically during the nineteenth and twentieth centuries, away from primary/agricultural goods production towards manufacturing industries and then to services industries, some developing countries have shifted from agriculture to services (retail and trade) without developing a strong manufacturing sector—a process known as premature deindustrialization (Rodrik 2016). The service sector is, in general, more productive than agriculture but is not, across the board, technology-intensive.³

The types of STs that allowed differentiating between developed and developing countries were, according to Solow (1956), related to sectoral development, factors of production, characteristics of the financial system, and healthy dynamic influences. For example, a large proportion of workers who are highly qualified and employed in the formal sector, and a diversified manufacturing industry that is larger than other sectors such as agriculture or mining. Also, strong public finances with low debt dependency that rely on direct taxes and provide social security, as well as diversified foreign trade in terms of products and recipient countries. Finally, low poverty and post-tax inequality, plus a well-developed financial system, high investment, and savings, usually accompanied by slow population growth and high urbanization.

Sumner (2017), in a more contemporary understanding of STs, grouped these characteristics into three main areas. The first refers to sector aspects, or changes in the relative weight of the different productive sectors and their employment shares, towards higher productivity. Second, the factor aspects of ST are about the composition of the productive structure and productivity levels—drivers of economic growth. The third aspect relates to the characteristics of global integration in terms of trade and investment patterns. In the rest of this section, we will discuss the transitions Chile has experienced in relation to these three aspects.

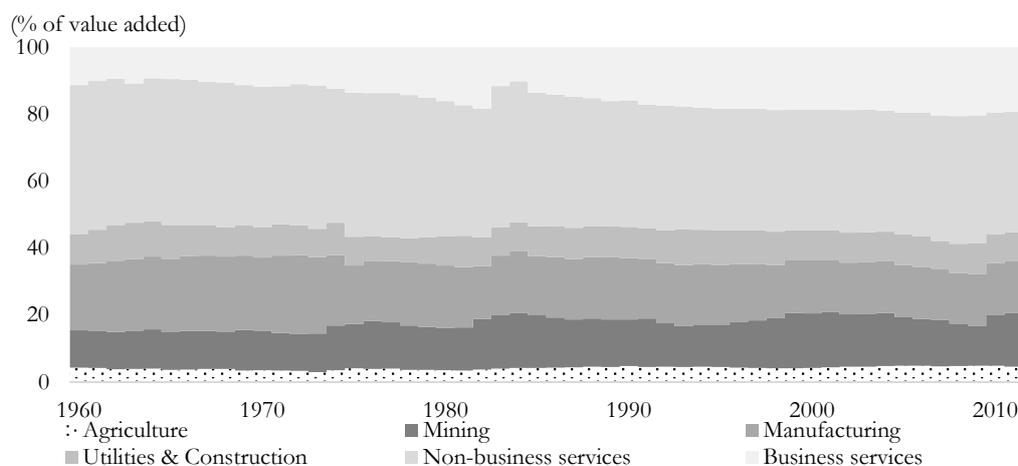
4.1 Changes in the Chilean economic structure

Structural transformations are often described as the movement from agriculture to other, more productive activities. In Chile, as in the rest of Latin America, agriculture has been shrinking since the second half of the twentieth century. In the early 1960s, this sector represented almost 9 per cent of regional GDP, which decreased to 5.5 per cent by the year 2000 and has remained around that figure since. In Chile, this sector represented about half of the value-added regional average until 1975, and has been approaching the Latin American average since that date. As shown in

³ The pattern of premature deindustrialization is not always the case. Korea, Taiwan, Singapore, and Finland created strong technology-intensive sectors during their development processes.

Figure 3, agriculture represented about 4 per cent of value-added from 1960 to 2000, and has been closer to 5 per cent of the country's value-added since.

Figure 3: Value-added composition for Chile, 1960–2011



Source: authors' creation, based on Timmer et al. (2015), GGDC 10-Sector Database, version 2015.

The size of the manufacturing sector is strongly associated with the degree of industrialization and therefore with more sustainable development. As mentioned previously, Chile started an early deindustrialization process. The sector was growing and reached a peak of about 24 per cent of the total value-added in 1972. In September 1973, an authoritarian military government took power in the country and pursued several policies that undoubtedly affected the trajectory of ST in Chile. These included exchange rate devaluation, privatization of public enterprises, opening up to international trade, and curtailment of labour unions. Of these neoliberal reforms, trade liberalization is perhaps the one that affected most dramatically the country's productive structure. Prior to 1974, the manufacturing industry enjoyed high tariff protection, which was gradually phased-out along with all import quotas, leaving flat import tariffs of 10 per cent in 1979. Trade liberalization induced a significant change in relative prices in favour of agriculture, mining, and non-tradable goods, affecting the allocation of resources within the economy (Alvarez and Fuentes 2006; Contreras and Ffrench-Davis 2012). By 1975, Chile was affected by a drop of nearly 12 per cent of GDP, with annual inflation exceeding 300 per cent. The military government adopted a shock treatment strategy to curb inflation, and also the terms of trade declined. This entailed contractionary fiscal and monetary policy, along with a significant devaluation of the Chilean peso (Ffrench-Davis 2018; Solimano 2012a). These measures did not have a substantial impact on sticky inflation, but led to a sharp contraction of economic activity and a reduction of real wages. By 1975, industrial production had fallen 28 per cent (Jadresic 1986).

With the opening up to international trade and the Latin American debt crises at the beginning of the 1980s, the manufacturing sector reached the low point of the decade in 1982 at 15.7 per cent of total GDP. Manufacturing started to recover by the second half of the 1980s until the mid-1990s, gaining 3 percentage points by 1994 when the second phase of contraction started. Since the beginning of the twenty-first century, the declining trend of the manufacturing sector's share of GDP has continued; the latest figures from the Central Bank of Chile show an even more pessimistic scenario. The share of the manufacturing sector fell to 10.3 per cent of GDP in 2018.

Mining is a key productive sector for the country. Chile is the world's largest copper producer and owns one-third of the world's copper reserves, which is mainly used for electrical conduction. Chile is also among the world's top lithium producers; lithium is the main component of modern batteries (Solimano and Calderón Guajardo 2015). The share of the mining sector has represented,

on average, 15 per cent of the total economy since the mid-1970s. Fluctuations in the international price of copper have defined the trajectory of the mining sector as this metal represents more than half of the country's total exports,⁴ and the fall of the sector during the first half of the 1990s parallels the sharp drop in the international price of copper (SONAMI 2019). The boom in copper prices during the 2000s increased the profitability of the industry, attracting foreign investment that helped to grow the sector (OECD and UN 2018).

The largest sector of the Chilean economy is services. To visualize the trends in this sector, we split the industry into two parts; the first comprises finance, insurance, real estate, and business services, and the second comprises non-business services. The latter includes the subcategories of trade, restaurants, and hotels; transport, storage, and communication; and community, social, and personal services. The service sector, as a whole, has had rather stable participation in the total economy at 52–56 per cent of the total value-added from 1960 onwards. However, its composition has changed over time: the community, social, and personal services sector has reduced its share in total output, while the financial services sector has steadily increased its relevance, reaching 20 per cent of GDP by 2010. In other words, we observe a trend towards financialization of the economy (increased share of finance, insurance, real estate, and business) and that coincides with the deindustrialization process (fall in the share of manufacturing).

Other non-manufacturing industries are utilities and construction. Utilities represent less than 3 per cent of the total value-added in the 1950s, declining to just above 1 per cent in 2011. Construction, as can be expected, is pro-cyclical. It saw declines in periods of economic contraction (recessions and slowdowns), and growth when the general economy expanded (booms and upswings). Its worst period was the second half of the 1970s, and it has remained at 6.5–7 per cent of GDP since the 1990s.

To summarize, the productive structure in Chile has experienced significant changes in the last 50 years. We can identify some trends in structural changes in sector shares. The first is the growth of the services and financial sector, as well as the mining sector. Services tend to be labour-intensive but not technology-intensive; and mining is technology-intensive but requires few workers, most of whom are highly qualified. The second trend is deindustrialization, shown by the shrinkage of the relative position of the manufacturing sector in aggregate output. Industries such as textile, metal-mechanic, and shoe production contracted sharply with trade liberalization in the mid-1970s and, later, with enhanced price competition from China and other East Asian markets. The ownership structure of productive assets strongly tilted towards the private sector due to the wave of privatization following the free-market revolution of the mid-1970s. The trend of deindustrialization is worrisome and could negatively Chile's ability to achieve STs towards higher and more sophisticated levels of productive development and technological advance.

4.2 Changes in employment structure

Following the changes in the productive structure, Chile's employment structure has undergone drastic changes since 1960. As is shown in Figure 4, in most sectors we can distinguish inflexion points in the employment trajectories that coincide with both political and economic crises.

⁴ From 1960 to 1974 copper accounted, on average, for 80 per cent of total exports. That figure dropped to about 60 per cent in the period 1975–89, and fell to about 50 per cent from the 1990s, on average.

Figure 4: Employment composition, Chile, 1960–2012



Source: authors' creation, based on Timmer et al. (2015), GGDC 10-Sector Database, version 2015.

In 1960, three sectors represented 87 per cent of the total employment: non-business services (39 per cent), agriculture (30 per cent), and manufacturing (18 per cent). Between 1960 and the mid-1970s (before the free-market revolution), the employment share in agriculture fell steadily, and was absorbed mainly by the manufacturing and non-business service sectors. The period after the military coup (1973–75) marks a turning point for the manufacturing sector, which fell from 22 to 14 per cent of total employment between 1973 and 1982. The declining trend in agriculture remained, and the non-business services sector offset both shrinkages. With the economic crisis of 1981–82, GDP per capita fell by 17 per cent and unemployment increased by almost 10 percentage points, reaching 20 per cent in 1982 (Cowan et al. 2004).

After the crises, the economy recovered slowly until the end of the military government in 1989. The financial sector became more regulated and received substantial public resources after the financial crash, doubling its share of employment during the 1980s. At the beginning of democracy in 1990, the occupation structure was dominated by non-business services, which represented 48 per cent of total employment, while agriculture and manufacturing represented 18 per cent each.

The rapid growth of the 1990s once again impacted the labour participation of various economic sectors. The share of agricultural employment fell by almost half in this decade, accounting for only 10 per cent of total jobs in 2000. The employment shares of mining and manufacturing also declined considerably. The service sector absorbed the decrease in employment in agriculture, mining, and manufacturing, becoming the largest sector by employment, with 67 per cent of the workforce employed in it. The 1990s saw accelerated GDP growth and a decline in the relative contribution of manufacturing to overall job creation, along with a consolidation of the process of financialization.

Finally, the first decade of the twenty-first century accentuated the upward trend in the service sector (business and non-business services), which reached 70 per cent of total employment in 2012, with employment in the agriculture and manufacturing sectors falling to 8 and 10 per cent, respectively.

In summary, in this period we observe even more drastic changes in the distribution of employment than we saw in the productive structure. These are related to the flow of workers from the agriculture and manufacturing sectors to the services sector. Within services, the absorption of employment is mainly in the subsectors of commerce, restaurants, and personal and

social services. There is a tendency towards financialization, given the high growth of employment in the financial sector. The latter requires more qualified workers and concentrates a greater use of technology than other services, but only accounts for one-quarter of all services, which in turn represent almost 70 per cent of total employment in Chile. As we mentioned in the previous section, more recent figures for sectoral GDP indicate that the manufacturing sector continues to shrink, as does the number of jobs, deepening the deindustrialization of the country.

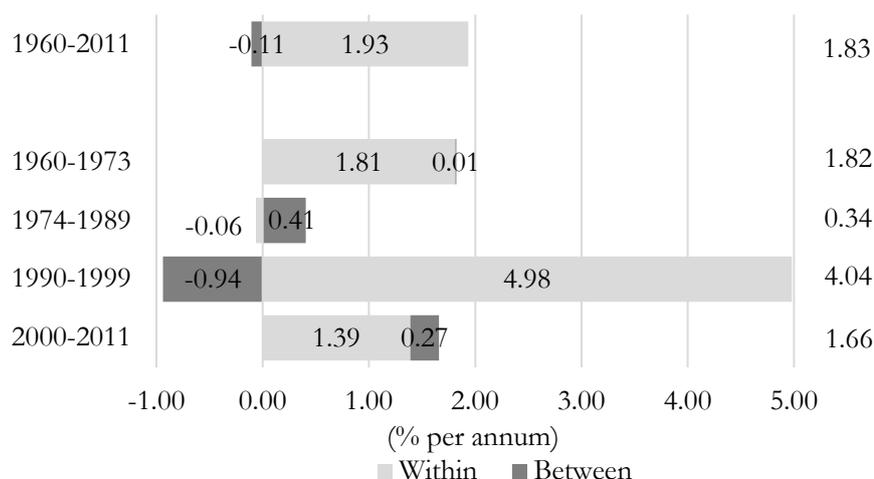
4.3 Changes in labour productivity

According to McMillan and Rodrik (2011), total labour productivity can grow only for two reasons. First, when productivity rises within a sector through capital accumulation, technological development, or a reduction of plant misallocation. Second, when there is reallocation of labour across sectors with different productivity levels, from low- to high-productivity sectors. The first type of productivity growth is called a ‘within-sector’ component, and the second is called ‘structural change’ because it enhances economy-wide productivity growth.

In developing countries, labour productivity gaps are usually very large between sectors. This is particularly the case when these countries have mining enclaves, which are technologically intensive but employ a small share of the labour force, as is the case in Africa and Latin America. It was expected that after the measures taken by many countries in Latin America following long periods of dictatorship in the 1980s, a new economic environment would yield significantly enhanced productivity performance. These measures included control of inflation and fiscal deficits, independent central banks, opening up to international trade, privatization of public enterprises, and reduction in subsidies, among others. However, the increase in productivity was not homogeneous across the economy. The intensified competition caused by trade liberalization left fewer manufacturing firms in the market, and displaced workers from closed firms ended up in less productive activities such as services. Thus, the decline in the manufacturing sector translated into growth-reducing structural change (McMillan and Rodrik 2011).

Chile did not depart from this regional trend. As Figure 5 shows, the entire increase in labour productivity from 1960 to 2011 was due to the within-sector component, with a negative structural growth component. We divided the total time length into four sub-periods relevant for the analysis. The highest productivity increase occurs with the return to democracy in the 1990s, which coincides with a strong economic boost in the country. During this decade, Chile’s GDP grew on average 6 per cent annually (Figure A1 in the Appendix), although the structural change in labour productivity was negative due to the expansion of the services sector in terms of both value-added and employment.

Figure 5: Decomposition of labour productivity growth in Chile, 1960–2011



Note: the decomposition uses the methodology of McMillan and Rodrik (2011).

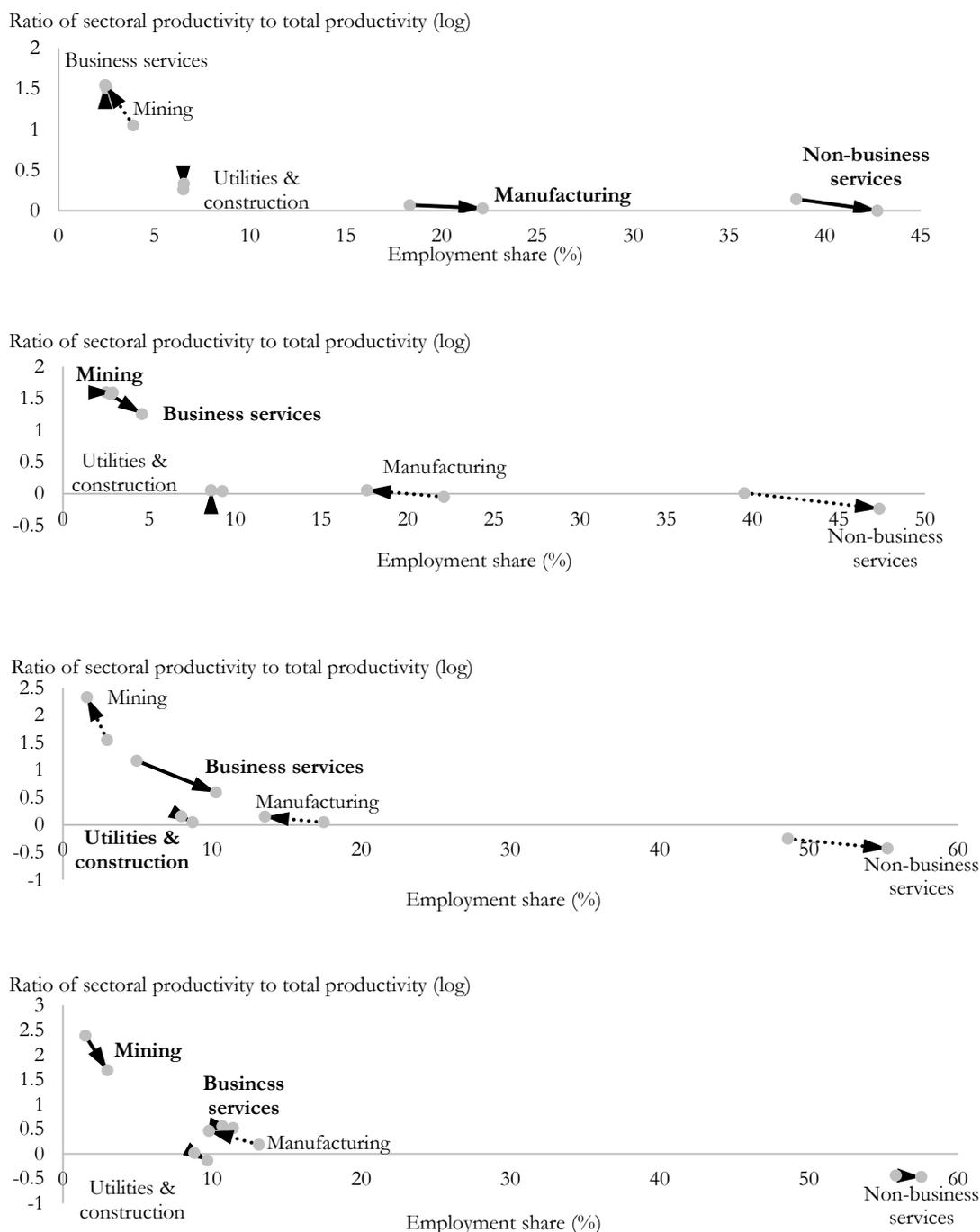
Source: authors' creation, based on Timmer et al. (2015), GGDC 10-Sector Database, version 2015.

Comparing average labour productivity can be misleading if labour shares vary significantly across sectors. For instance, the reason why the labour productivity of the mining sector is so high might simply be that the labour share of this highly capital-intensive sector is quite small. For that reason we need to analyse together the changes in productivity and changes in employment shares, as shown in Figure 6 for the different sub-periods under study.

We do not observe significant simultaneous rises in relative productivity and employment in any of the periods. The above-average productivity sectors that increase their employment shares from 1960 to 1973 are manufacturing and non-business services; however, the relative productivity in both cases declined in the period (Figure 6a). During the dictatorship period (Figure 6b) relative productivity worsened in most sectors. This was accompanied by escalations in employment shares of all services, particularly in non-business services (7 percentage points). On the contrary, the employment share in manufacturing fell more than 4 percentage points. In the 1990s, the generation of employment in the services sector was intensified, although at lower levels of relative productivity (Figure 6c). The turn of the century came with a slowdown of the economy and minor changes in productivity and employment (Figure 6d).

An important factor that threatens labour productivity in Chile is related to educational outcomes and the weakness of job training programmes. According to the PISA (Program for International Student Assessment) test, Chile has one of the lowest proficiencies in literacy, mathematics, and science of 15-year-olds among the OECD countries. Twenty-eight per cent of students lack the elementary skills required to read and understand simple texts or to master basic mathematical and scientific concepts and procedures; and 53.4 per cent of adults score at the lowest levels in literacy, and 61.9 per cent score low in numeracy (OECD 2018b, 2019).

Figure 6: Changes in labour productivity and employment share, Chile, 1960–2011. (a) 1960–73; (b) 1974–89; (c) 1990–99; (d) 2000



Note: sectors with higher than economy-wide average labour productivity that experienced an increase in employment share are in bold.

Source: authors' creation, based on Timmer et al. (2015), GGDC 10-Sector Database, version 2015.

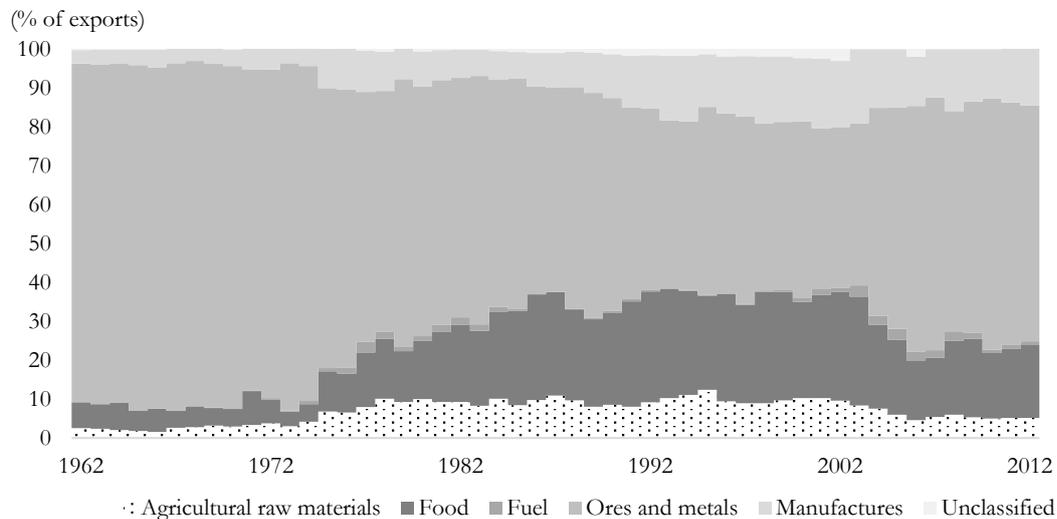
4.4 Trade structure (exports, imports)

Another important issue in STs is the diversification of the economy in terms of activities and markets. The Chilean export structure is very constrained in both. Currently, China, the United States, Japan, and South Korea are its main trading partners; together, they receive 57 per cent of Chile's total exports (Simoes and Hidalgo 2011). Copper and its by-products account for almost half of total exports; the remaining half is still very concentrated in natural resources with limited value-added. A major weakness of this trade structure is that it makes the country very vulnerable to external shocks. A contraction in demand by any of these four countries, as well as changes in the international prices of the commodities, can affect the entire economy (OECD and UN 2018).

However, there is progress in terms of mineral dependency. In Figure 7, we can see that from 1962 to 1974, copper and other metals represented on average 87 per cent of total exports, a share that was consistently reduced until the beginning of the new century. The boom in copper's price from the 2000s attracted foreign investment in the sector, which again increased the proportion of this metal in total exports. Still, the upsurge in the production of other metals such as lithium allows some degree of diversification.

On the other hand, Chile's imports map out the limitations of the country's productive structure. From the mid-1980s, on average, 70 per cent of the country's imports have been manufactured products. Little progress has been made to revert this tendency since there has not been a clear decrease in these imports in the last decades. There has also been a rise in fuel consumption, particularly from the 2000s, directly related to the mining industry, which uses energy-intensive production processes.

Figure 7: Export composition for Chile, 1962–2012



Source: authors' creation, based on World Bank (2019a) and the World Development Indicators, version June 2019.

5 Trends in income inequality, employment, and inclusive growth

Inclusive growth is defined in terms of who benefits from economic growth and by how much. In other words, to what extent growth leads to a reduction in poverty and a decline in inequality.⁵ The concept can be extended to include the direct participation of the poor in growth processes via employment and/or reduction in the inequality of opportunity through capability expansion (e.g. health and education access) (Sen 2014). Let us examine poverty and inequality trends (including social policies) that have accompanied Chile's growth since the mid-1980s, as well as their impact on employment generation.

5.1 Growth, poverty, and inequality

By the early 1970s, Chile stood out among the Latin American countries for its pro-development social policies. Some of these achievements were a high literacy rate, increasing enrolment rates, a national health service, a social security service for blue-collar workers, an organization for the construction of social housing, and a massive school meals programme (Arellano 1985). Moreover, agrarian reform was carried out between 1965 and 1973 and, in this period, new labour union organization helped to improve the conditions of rural workers and pushed for reduced overall poverty and inequality in the country (Ffrench-Davis 2018).

After 1973, during the military dictatorship, overall inequality increased, although some specific social indicators improved. For example, the number of students in secondary education increased from 51 per cent in 1973 to 75 per cent in 1989, and infant mortality fell from 66 per 1000 live births to 33 between 1973 and 1980.⁶ However, economic, tax, and labour reforms strongly affected employment and salaries in rather regressive ways. By 1989, the average real wage was 8 percentage points below its 1970 level. In 1984 tax reform was carried out which lowered the rate of reinvestment of profits from 40 to 10 per cent—this reinvestment rate was eliminated in 1988 before the return to democracy; the taxes paid by the companies were converted into credit for the progressive tax paid by the shareholders, in practice eliminating corporation taxes. Progressive tax rates were reduced and the income bands were extended. Tax exemptions were established for the purchase of shares in companies in the process of privatization. In this way, progressive taxation was weakened and inequality worsened considerably (Ffrench-Davis 2018; Jorratt 2009).

In 1987, 45 per cent of the population was under the national poverty line (MIDEPLAN 1998). According to other international benchmarks, in that year almost 75 per cent of the population was below the US\$10 per day threshold and almost 12 per cent under the US\$1.9 dollars per day threshold (Figure 8).

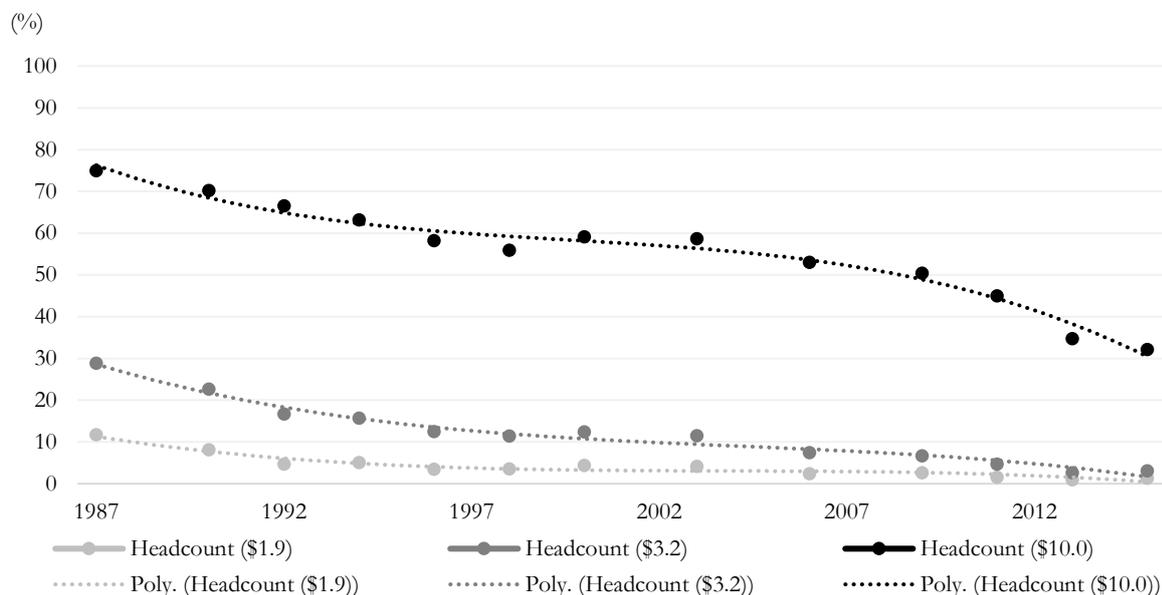
The return of democracy to Chile in the 1990s came with a steady decrease in headcount poverty. Poverty measured by income was reduced to 36 per cent by 2000 and to 8.6 per cent by 2017 (World Bank 2019b). In parallel, the number of people under the US\$10 and US\$1.9 per day thresholds showed the great decrease during the 1990s, and continued declining during the 2000s. Since 1998, as a consequence of the Asian crisis, GDP growth decelerated, reaching a minimum of -0.41 per cent in 1999 (see Figure A1), as did the reduction rate of poverty. According to Contreras (2003), a large proportion of the poverty reduction during the period 1990–96 can be attributed to sustained economic growth. The relationship between growth and poverty reduction

⁵ Some versions of the concept of 'inclusive growth' only define inclusive growth as leading to a reduction in poverty without also requiring a decline in inequality.

⁶ See <https://childmortality.org/data/Chile>; data provided by the Instituto Nacional de Estadísticas.

would also show increases in employment and wages. This was also a period of rising private investment and job creation that helped to revert the rises in unemployment and depression of real wages from the military dictatorship period (Contreras and Ffrench-Davis 2012). The increase in social spending (targeted cash transfers and subsidies) also contributed to poverty reduction (Gammage et al. 2014).

Figure 8: Poverty rates in Chile, 1987–2015



Source: authors' creation, based on World Bank (2019c) and Povcalnet, version March 2019.

To reduce poverty, Chile has mainly relied on aggregate economic growth complemented by subsidies targeted at the poor. As a consequence of the steady rise in per capita income from around US\$5,000 in the late 1980s to US\$25,000 dollars in 2018, income-measured poverty fell from nearly 45 per cent in 1989 to less than 10 per cent in 2018.

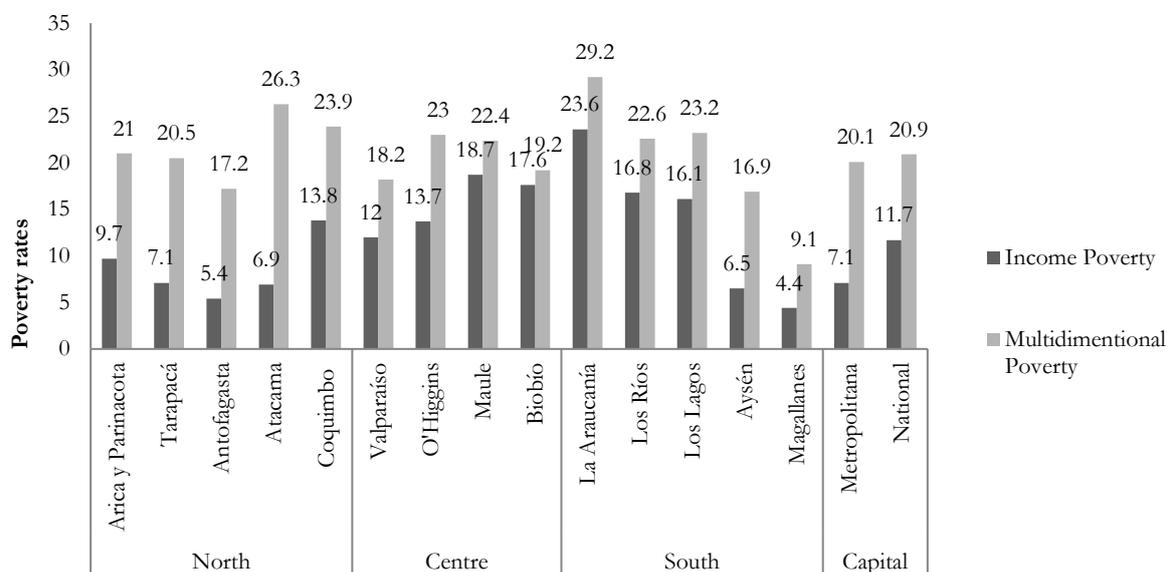
However, when considering other dimensions of wellbeing besides income, the picture is more mixed. At the national level, the measure of multidimensional poverty (which tracks access to education, health, housing, and other social services by the poor) is twice as high as income poverty, at 20.9 per cent in 2015.⁷ Indices of educational attainment are systematically lower for the poor than for the non-poor. Moreover, open unemployment and labour market informality are systematically higher for the poor than for the non-poor (CASEN 2017; Solimano 2018).

Figure 9 shows large disparities in the two measures of poverty levels across different regions in Chile. The highest poverty rate (multidimensional and income) is concentrated in La Araucania, in the south of Chile. This region concentrates the largest proportion of the indigenous population in the country, called Mapuches. Having an indigenous background in Chile comes with social and economic disadvantages. Recent studies on social mobility show that surnames of Mapuche origin have no representation in the most prestigious professions (doctors, lawyers, and engineers)

⁷ Since 2013, the Ministry of Social Development started measuring multidimensional poverty using the methodology developed by Alkire and Foster (2011). This measure comprises the dimensions of education, health, work and social security, housing, and networks. The first four dimension have a weight of 22.5 per cent each, from the total average, and networks a 10 per cent weight.

(PNUD 2017); people with an indigenous background are also disadvantaged in the labour market, being about 12 per cent less likely to be hired (Montero and Garcés 2009).

Figure 9: Percentage of people living in poverty by income and multidimensional poverty by region, 2015

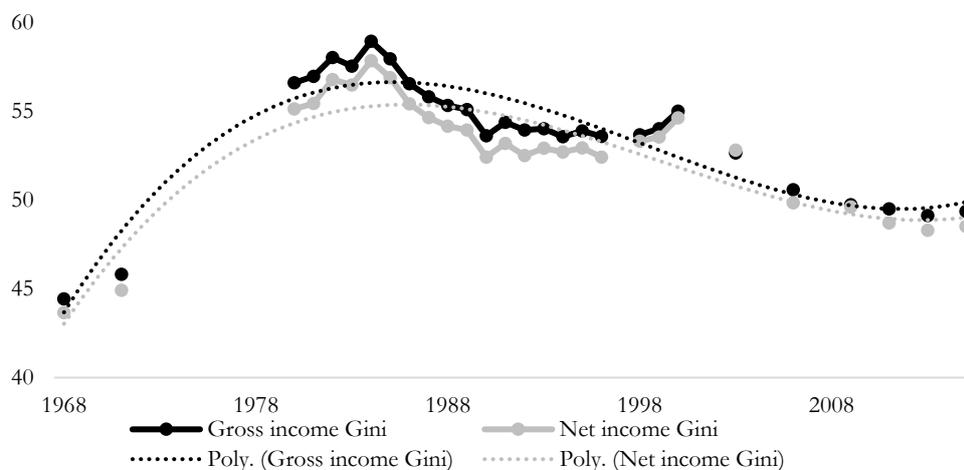


Note: multidimensional poverty considers five dimensions: education, health, work and social security, housing, and networks.

Source: authors' creation, based on the Ministry of Social Development Chile and CASEN (2015).

Inequality, on the other hand, proved to be more resilient and did not see the same rapid reduction as income poverty. Figure 10 shows two measures of inequality, the gross Gini and net Gini. The latter refers to the inequality in the distribution of income after correction by taxes and subsidies. In Chile, both measures follow the same trajectory with very small difference between them, suggesting that tax redistribution is very limited in the country.

Figure 10: Gross and net income Gini for Chile, 1968–2015



Source: authors' creation, based on UNU-WIDER (forthcoming).

Chile has one of the highest levels of inequality in the Latin American region, an area of the world that itself has the highest inequality levels, with a gross Gini coefficient of 49.36 (2015). An important source of inequality in Chile is high-income shares at the top of the distribution (concentrated in the top 10 per cent—more specifically in the top 1 per cent). According to Gammage et al. (2014), the richest decile had 35.6 times the wealth of the poorest decile in 2011. Using data on tax compliance from the Chilean Tax Service, López et al. (2013) estimate that the income share of the wealthiest 1 per cent of the population was, on average, 32.8 per cent of the entire country's income during the period 2005–10; the share of the top 0.1 per cent was 19.9 per cent; and the top 0.01 per cent got 11.5 per cent of the country's wealth.⁸

Undoubtedly, the decline in income inequality since 2000 (Figure 10) is a positive development, although the absolute levels of income inequality remain high by international standards. The Gini coefficient fell by almost 6 points between 2000 and 2015 due to an increase in real wages, improvements in the minimum wage, and cash transfer to the poor. In this period, the income of the first (the poorest) decile grew 145 per cent in real terms, while that of the last (the richest) decile grew 30 per cent. However, in absolute terms, while the most deprived decile increased its income by 2.5 times, that of the wealthiest grew nine times over. It is not surprising, then, that although the least advantaged more than doubled their real income, their perception of the income gap not shortening persists (PNUD 2017).

Given these high indices of inequality, and despite the trend of declining inequality since the 2000s, it is hard to conclude that Chilean economic growth in recent decades has been inclusive. Although 'all boats have been lifted on the rising tide', the main winners of this period of prosperity and growth are located at the top of the distribution. The causes of this bias towards the very rich in the Chilean growth process need to be analysed in more detail, which goes beyond the scope of this paper. Part of the story is probably related to the concentration of wealth that emerged after the privatization of public assets undertaken in the 1970s, 1980s, and some in the 1990s. Tax policies that are not progressive, a steady deterioration in public education since the 1980s, and weak labour unions are all factors that have conspired against more inclusive growth (Solimano 2012a, 2012b). Other analyses also stress the fact that wealth concentration at the top of the income distribution strengthens economic elites.

5.2 Growth and employment generation

Another component of inclusive growth relates to the ability of the growth process to generate employment (Sumner 2017). Nonetheless, it is also important to analyse the *quality* of the jobs generated, not only concerning the level of wages paid—albeit this is certainly important—but also the job stability and economic security (related in part to the type of employment contracts used) that these new jobs provide. According to the International Labour Organization, decent jobs provide 'opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organise and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men' (ILO 2019).

In Chile, employment generally grew less than the economy in periods of high growth. While GDP has grown at an average rate of 5.5 per cent between 1990 and 2016, employment has increased,

⁸ These numbers are high by global standards. In 2007 in the United States the income share of the top 1 per cent was 23 per cent, in the UK it was 14 per cent, and in France it was 8 per cent, based on income data from the respective internal revenue services (Atkinson et al. 2011).

on average, by 2.5 per cent during that period. In turn, 1.7 percentage points of this correspond to jobs having full-time contracts. The rise in employment has been driven mainly by contracts of fewer than 30 hours per week.⁹ Working weeks of fewer than 10 hours have increased, on average, 7.5 per cent, and those of 11–30 hours per week have risen at a rate of 5.1 per cent.

Regarding the impact of GDP growth on real wages, in the period 2000–09 the economy grew at 4.6 per cent and real wages only at 0.9 per cent (Kremerman et al. 2017). The minimum wage has increased in real terms by 28 per cent between 2005 and 2014. Still, the ratio of the minimum wage to GDP per capita has decreased from 36.2 per cent in the period 2005–06 to 32.5 per cent in 2014–15 (ENCLA 2014).

In terms of job stability, 51 per cent of workers in the formal sector had contracts of less than three years in 2014, mainly in the services sector, which is where most jobs have been created in the last 20 years. Moreover, 29 per cent of the workers have fixed short-term contracts, used mainly in construction and agriculture (ENCLA 2014)—the OECD average for this is 12 per cent (OECD 2016). While in more developed countries a short-term contract is a route to a permanent job, in Chile 40.9 per cent of these contracts are renewed as short-term contracts after their expiration, and only 36.8 per cent lead to permanent jobs (ENCLA 2014 cited in PNUD 2017). Another factor that affects employment stability is outsourcing; this is a common practice in Chile that in 2014 affected 17 per cent of the workforce.

6 Public policies and political economy aspects of Chilean ST and development

Structural transformation and the pattern of overall economic development are shaped, jointly, by public policies and political economy conditions. The former refer to areas such as international trade, industrial policy, credit, macroeconomic management, and others. The second set of variables refers to factors such as relative power of labour, influence of economic elites, degree of social mobilization, distributive conflicts, and institutional frameworks. Let us examine the periods we have considered in this chapter.

6.1 Before dictatorship

The ISI strategy followed by Chile from the early 1940s to the early 1970s—before industrialists supported the military coup of September 1973—linked to productive activities that enjoyed import protection from tariffs and other devices (quotas and preferential import arrangements for intermediate parts and capital equipment). The ISI strategy also came along with expanded labour union membership in the public and the industrial sectors. Labour unions were particularly active in the 1950s and 1960s as inflation eroded the purchasing power of wages. In the early 1970s, although inflation skyrocketed in 1972–73, the labour union movement, in general, supported the Allende government and the head of the CUT (the main nationwide labour confederation) became the minister of labour and social security in the Popular Unity government. The agrarian elite of landholders (the *latifundistas*) benefited from ownership of large area of land—a situation that started to change with the launch of agrarian reform in the mid-1960s until 1973. In the social area, with varying intensity, public policies were advancing towards increasing degrees of universality in the provision of social services within a general trend of increasing degrees of inclusion of the

⁹ Up to 31 December 2004 the regular working hours in Chile were 48 per week, with a maximum of 60 hours (12 hours of overtime). From 2005 the legal maximum hours per week was reduced to 57, which includes the 45 regular working hours plus 12 of overtime.

middle and working classes through access to public education, public health, housing, and social security schemes. Social rights were promoted through progressive legislation and labour codes in the direction of increasing universality, but faced difficulties reaching the very poor in rural areas and the marginalized in urban centres.

The political economy of the 1960s was characterized by increasing demands for democratization reflected in the growing participation of various groups in national decisions and the acceleration of agrarian reform. The Allende period (1970–73) of transition to democratic socialism was more polarized. Economic elites (firm owners, bankers, landed aristocracy) opposed nationalization policies and agrarian reform. They resented the attempt to change the economic and political structure of Chile away from the traditional power elites and towards the working classes. On the foreign front, US copper corporations, dissatisfied with nationalization terms, managed to mobilize the US government—headed at the time by President Richard Nixon and Secretary of State Henry Kissinger—to cut multilateral funding to Chile from the International Monetary Fund and the World Bank. The Church Report of the US Congress later confirmed that the Nixon administration also engaged in political and economic destabilization of the Allende government and favoured the military coup of September 1973 (Solimano 2012a, 2012b).

The Allende government had active support from labour unions, peasant organizations, left-wing political parties, intellectuals, and progressive middle-class organizations. However, the economic crisis that erupted in 1972, resulting in high inflation, food shortages, strikes, and the stalling of growth turned upper-middle-income groups and well-to-do households against the government, and even mobilized some labour unions in the copper sector. This climate of internal division eventually also reached the armed forces, traditionally respectful of civilian democratic rule (see Solimano 2012a, 2012b).

6.2 The Pinochet era

After the military coup, basic democratic procedures were suspended for nearly two decades: parliament remained closed from the day of the coup (September 11, 1973), labour union activity was severely restricted if not banned, civil rights were suspended, left-wing parties were prohibited, and the press was tightly censored by military delegates. The national stadium and islands in the far south became detention camps for political opponents and labour leaders in the initial months and years after the coup.

The free-market economic agenda of the military regime affected traditional industrialists who had flourished in the ISI period. On the other hand, neoliberal policies had the support of a class of new owners who acquired public enterprises at low cost, and also of financial intermediaries that reaped big benefits from banking deregulation. Workers could not effectively oppose privatization policies and massive lay-offs in the public sector. A new dynamic sector was agro-industry for export, which created additional support groups for trade opening. The agro-industrial export sector benefited from more competitive real exchange rates and lower tariffs, and also from policies adopted in the 1960s to promote forestry, fishing, and fruit planting.

Policies that shape ST have already been discussed, and include—since the mid-1970s—tariff reductions and elimination of non-tariff trade barriers, exchange rate policies alternating different objectives in various periods (e.g. anti-inflation in 1979–82 versus export promotion post-1985), the absence of explicit industrial policies, and policies of selling public enterprises created by the Chilean state during the period of ISI from the 1940s to the 1970s. This approach to social policy changed, markedly, in the late 1970s and early 1980s when the Pinochet regime launched a set of ‘market-oriented social policies’. In the new scheme, the supply of social services traditionally provided by the state started to be delivered by the private sector, often through for-profit

companies. In fact, the military regime passed new laws that allowed for-profit providers to operate in the education, health, housing, and pension-fund management sectors. The new commercial providers could start charging fees at ‘market prices’ for social services. Pricing was not the only critical dimension. Given the complex nature of education and health services along with the fact that the privatized social security system was based on risk–return combinations hardly understood by the population, issues of highly imperfect information and insufficient regulation under oligopolistic market structures also became very relevant. Although more regulation and expansion of social services were introduced after the return of democracy, the overall market orientation of social policies undertaken in the Pinochet era was largely preserved in the post-Pinochet era.

Market-oriented social policies shifted the cost of accessing social services to beneficiaries, reducing the financial burden for the state and increasing it for households. According to the OECD and the World Bank, Chilean families pay—relative to their budgets—the highest proportion for the education of their children (nearly 28 per cent) out of all OECD economies (see Solimano 2012a, 2012b).

In the market-based social policy model, the recipient’s ability to pay determines the quantity and quality of education, health services, and housing. For example, students coming from upper-middle-class and rich households have access to more expensive and (hopefully) better educational facilities that charge higher fees than students coming from middle- and working-class backgrounds. The income level of the student and his or her family becomes a critical determinant of access to education. In this context, talented students from low-income families cannot afford to attend good schools, creating an adverse selection system that is both detrimental to long-run growth (due to the loss of human capital accumulation) and also exacerbates pre-existing inequality (Bourguignon 2018; Corak 2013; Gaentzsch and Zapata Román 2018; Torche 2014).

The strategy of several governments for dealing with the problem of lack of access to university education due to insufficient income has been to offer student loans administered by commercial banks (charging significant real interest rates that later were reduced through a government subsidy to commercial banks). As expected, there has been an increase in the level of student debt. The rate of return to university education is not guaranteed, as certain university careers, offered by less prestigious private universities, do not always ensure good job market access. Resistance to policies of privatization of education, high fees, and the proliferation of student debt have given rise to an active student movement mobilizing around an agenda of ‘quality and free education for all’.

Over 80 per cent of the population uses the public health system, which tends to be chronically undercapitalized; there are significant waiting periods for surgeries and other complex medical services. The remaining 20 per cent avoid queuing by going to expensive private clinics. The scheme is financially managed through a private health insurance system called ISAPRES.

An important piece of market-oriented social policy was the privatization of the pension system for the civilian population, undertaken in the early 1980s. This system is still in operation. Currently, more than 10 million people hold individual pension-savings accounts (of which 5.5 million regularly contribute to the system) managed by for-profit private pension-fund management companies—the AFPs by its Spanish acronym. Under this scheme, the state is barred by law from offering pension-fund management services to the population that could compete with the AFPs (Solimano 2017). Also, a public pillar, open to all contributors, based on pay-as-you-go funding modality has been absent in Chile since 1981. The accumulated pension funds of wage earners in the hands of the AFP system (managed by six private firms) is US\$200 billion (Solimano 2018), equivalent to 70 per cent of Chilean GDP. These funds, in turn, are the main source of low-cost capital for large Chilean corporations, commercial banks, and foreign

corporations. Fund management companies charge a fee to every pension account and earn an average rate of return of 25–30 per cent of the invested capital (Solimano 2017). In contrast to the high profit rate of the pension management companies, the average monthly pension received by the pensioners is close to US\$350, certainly a modest amount in a country with a per capita income per month slightly above US\$2,000 (Solimano 2017).¹⁰ To ensure a minimum pension to low-income people, the state finances out of general tax revenues a basic pension pillar (the *pilar solidario*). This pillar reaches about 1.5 million people and provides a basic pension of US\$150 per month to those whose incomes are below the sixth decile (the poorest 60 per cent); the state also provides a subsidy (APS) to a range of people in receipt of low pensions.

6.3 The return to democracy

The restoration of democracy in 1990 posed several dilemmas to the new civilian governments. Should they continue the free-market policies of Pinochet to avoid an interruption in private investment and foreign capital inflows? How much redistributive policy should be implemented to reduce poverty and correct the high inequality? What productive role was there for the state? In general, civilian governments abstained from progressive redistribution and continued with the free-market policies of Pinochet, but in a less ideological/more programmatic way, although following a general pro-business orientation. New fiscal resources were also devoted to increasing public investment and social sector spending, two neglected areas during the military regime.

The post-Pinochet civilian governments did not revise the obscure privatizations of public enterprises of the 1980s, and economic conglomerates expanded their command of resources, consolidating their political influence over the public policies adopted by new governments. Further privatization took place during the post-Pinochet democratic period. The provision of clean water to large cities was handed over to private companies during the government of President Frei Ruiz-Tagle (1994–2000), along with the closing of coal mining in the historic Lota area in the south of the country.

Civilian governments also maintained the private provision of education, health, and the capitalization pension systems instituted by the military regime in the early 1980s. However, in the early 2000s some new programmes in the health sector were put in place, such as the AUGE plan that provided financial resources to patients for the treatment of a list of medical illnesses. In 2008, under the first Bachelet government, a partial reform of the pension system was carried out that created the pillar of minimum pensions and supplementary subsidies for people with small pensions. However, the Bachelet reforms fell short of challenging the monopoly of the AFP system on private pension funds. The big pension saving surpluses (on the order of 70 per cent of GDP) continued to be channelled to large corporations, shaping the savings-investment process in a pro-capital fashion. In turn, labour legislation encouraging ‘job flexibility’ has been functional in maintaining a modest labour share in national income (around 35 per cent).

Employment generation benefited from economy-wide growth, and free-market labour legislation has enabled ample control of the labour process by capital owners. The main source of employment creation has been the services sector, in particular trade, hotels and restaurants, and the financial sector. Job stability and labour rights have been affected by the weak bargaining power of labour due to de-unionization, outsourcing, and fragmentation of labour unions. Some legal practices adopted by firms, such as having multiple tax identification numbers (known as the multi-

¹⁰ The state also funds pensions of the old pension system and provides the bulk of funding for the pension system of retired personnel of the armed forces who receive average pensions that can be up to four times higher than pensions paid to the civilian population.

rut),¹¹ reduced tax burdens for firms and helped divide labour unions. The multi-rut system was phased-out in 2014.

In the second government of Bachelet, the tax system underwent changes whose net distributional effects are ambiguous. On the one hand, the tax reform of 2014 moderately increased corporation income taxes and reduced deductions from corporation taxation to personal taxes for firm owners (pro-equality changes). On the other hand, it reduced top marginal income tax rates from 40 per cent to 30 per cent, a policy that goes against reducing the income share of top income earners (the upper 1 or 0.1 per cent), which in Chile, as shown before, is exceedingly high.

7 The future trajectories of ST, inequality, and inclusive growth

The Chilean economy faces several challenges in the years ahead, the resolution of which will affect future trajectories of ST, inequality, and growth. In the 2000s a series of macroeconomic reforms was introduced to reduce the effects of external shocks and consolidate macroeconomic stability. A fiscal rule to increase fiscal spending according to expected long-term values of growth and terms of trade was put in place, and in 2008 an Economic and Social Stability Fund was created along with a Pension Reserve Fund. An independent central bank complemented the macro framework with a flexible exchange rate regime and a precautionary policy of holding relatively large international reserves. Current inflation remains at around 3 per cent per year, and persistent macro imbalances are generally avoided.

The challenges on the real side of the economy (sustainability of growth, productive diversification, productivity growth) remain more complex. As the country approaches higher levels of per capita income, convergence to the growth rates of the mid-1980s and 1990s (6–7 per cent per year) seems unlikely. Further acceleration in the rate of economic growth will depend more on productivity growth and technical improvements than on factor accumulation, because of diminishing returns to capital. In turn, the current *composition* of growth, as discussed before, is tilted to mining and services, with a diminished manufacturing sector. A reversal of these trends may not be easy; currently, Chile spends less than 0.4 per cent of its GDP on R&D (well below the average OECD level of around 2.5 per cent of GDP) and successive governments are reluctant to adopt more active industrial policies. Also, the value-added intensity of the export bundle remains moderate as the country still relies on the export of commodities (copper) with relatively low intensity in value-added, although agro-industry exports are more labour-intensive. The OECD, in Chile's last 'Productive Transformation Policy Review', highlighted the need for an 'update' of the development strategy in Chile, stressing the need to increase factor productivity growth, reduce the territorial concentration of production, increase value addition in services, reduce over-reliance on mining, and account for other deficiencies. The report proposes exploiting opportunities in green production, developing solar energy, increasing digitalization, and engaging in big data. The emphasis and recommendations of the report seem reasonable, although it is probably over-optimistic in its assessment of the willingness and ability of governments to do this 'update' of the Chilean development strategy (OECD and UN 2018).

Future trends in inequality and the prospect of more inclusive growth also remain uncertain. On the one hand, a Kuznets dynamic may be operating (in which at certain GDP per capita the economy becomes less unequal) as the gross and net income Gini coefficients have declined by 5–6 percentage points in the last 15–20 years. The expansion of higher education from nearly 200,000

¹¹ RUT: Rol Unico Tributario (tax code number).

students to close one million over this period has reduced the education premium and lessened labour income inequality. In the future, the earnings capacities of low-income workers will depend on their access to quality public education at primary, secondary, and tertiary levels—a goal hampered by the current deterioration of public education at primary and secondary levels. Capital incomes, in turn, depend on interest earned on financial assets, dividend flows from physical assets, and profits from current production. Chile exhibits high levels of wealth inequality, as documented before, which may be difficult to reduce through taxes on the very rich or other means because of political resistance to redistributive policies by powerful economic elites.

8 Conclusions

The Chilean development strategy of the last three to four decades has given priority to aggregate economic growth, orthodox macroeconomic management, and high profitability for foreign direct investment and big domestic business. There has been a pay-off in GDP growth, higher GDP per capita, and higher living standards, but growth has started to slow down since the 2000s. At the sector level, the economy has specialized in mining, finance, and services, with a diminished share of the manufacturing sector in output that reached a historical low of 10 per cent of GDP in 2017. There are also pressures on the environment after decades of resource-intensive growth. Since October 2019 the country has faced a serious period of social unrest with its roots in dissatisfaction with the economic model and its features of low wages, expensive social services, and overall inequality.

The empirical analysis of this paper shows a decline in the value-added shares of manufacturing and agriculture, and a rise in services, particularly finance, trade, and hotels and restaurants, with ups and downs in mining shares in the transition from the ISI strategy to the outward-oriented neoliberal model. These trends are more strongly accentuated for employment shares, with the decline in relative employment generation in agriculture and manufacturing going directly to the services sector, which accounts now for two-thirds of total employment in the economy. Trade liberalization led to severe reductions in the value-added shares of textiles, metal-mechanic, and shoe factories within manufacturing.

Social indicators for the last three decades or so display a mixed story: while total income-based poverty declined from 45 per cent in the late 1980s to less than 10 per cent in 2017, multidimensional poverty measured as gaps in access to education, health, the labour market, and housing was nearly 20 per cent in 2017, although with a declining trend. Inequality of income has dropped in the last 20 years, but it remains at high levels by international standards of countries with a similar level of per capita income. In turn, the Gini coefficients for total net wealth (around 70 per cent) and financial wealth (close to 90 per cent) are substantially higher than the net income Gini (nearly 50 per cent), adding a new and relevant dimension (i.e. wealth inequality) to the issue of economic inequality. Income and wealth concentration at the top (richest 1 and 0.1 per cent) are very high in Chile.

A more balanced development strategy for Chile would require significant changes in its production structure, away from the intensive use of natural resources and towards knowledge-intensive sectors, a revival of manufacturing, and clean production lines helped by a more environmentally conscious tax system. The reduction of high inequality and de-concentration of wealth would need important reforms in the tax system and the structure of markets, effective anti-trust legislation, and the rebalancing of bargaining capacities between labour and capital that revert the enormous economic surplus currently appropriated by wealthy elites, enabling more inclusive growth.

References

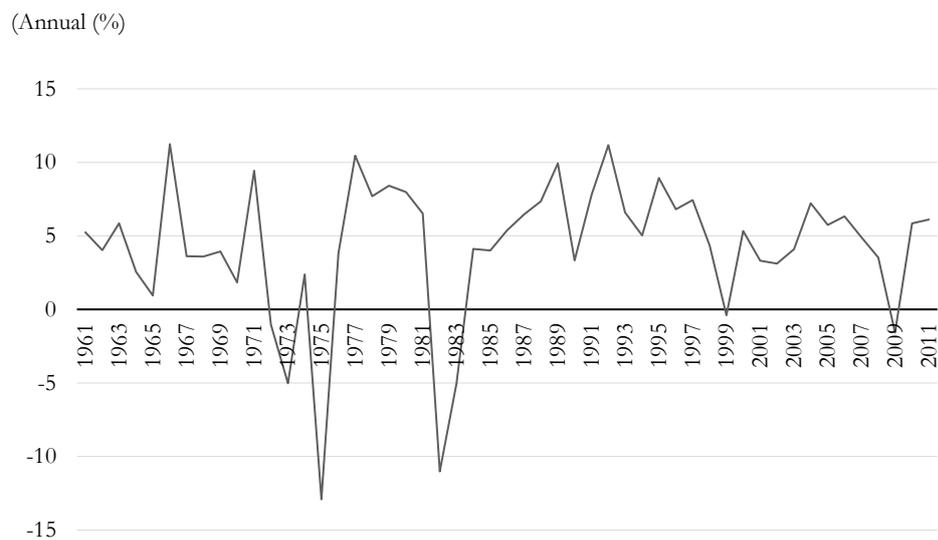
- Alkire, S., and J. Foster (2011). 'Counting and Multidimensional Poverty Measurement'. *Journal of Public Economics*, 95: 476–87.
- Alvarez, R., and J.R. Fuentes (2006). 'Trade Reforms and Manufacturing Industry in Chile'. In P.A. Aroca and G.J.D. Hewings (eds), *Structure and Structural Change in the Chilean Economy*. London: Palgrave Macmillan.
- Arellano, J.-P. (1985). 'Social Policies in Chile: An Historical Review'. *Journal of Latin American Studies*, 17: 397–418.
- Atkinson, A.B., T. Piketty, and E. Saez (2011). 'Top Incomes in the Long Run of History'. *Journal of Economic Literature*, 49(1): 3–71.
- Bourguignon, F. (2018). 'Measuring the Inequality of Opportunities'. In J. Stiglitz, J. Fitoussi, and M. Durand (eds), *For Good Measure: Advancing Research on Well-Being Metrics Beyond GDP*. Paris: OECD Publishing.
- CASEN (2015) *Ampliando al Mirada sobre la pobreza y la desigualdad*. Santiago: Observatorio Social, Gobierno de Chile.
- CASEN (2017). *Síntesis de Resultados*. Ministerio de Desarrollo. Santiago: Gobierno de Chile.
- Contreras, D. (2003). 'Poverty and Inequality in a Rapid Growth Economy: Chile 1990–96'. *The Journal of Development Studies*, 39: 181–200.
- Contreras, D., and R. Ffrench-Davis (2012). 'Policy Regimes, Inequality, Poverty and Growth: The Chilean Experience, 1973–2010'. WIDER Working Paper 2012/004. Helsinki: UNU-WIDER.
- Corak, M. (2013). 'Income Inequality, Equality of Opportunity, and Intergenerational Mobility'. *Journal of Economic Perspectives*, 27: 79–102.
- Cowan, K.N., A. Micco, A. Mizala, C.P. Pagés, and P. Romaguera (2004). *Un diagnóstico del desempleo en Chile*. Washington, DC: Inter-American Development Bank.
- Eichengreen, B., and P. Gupta (2013). 'The Two Waves of Service-Sector Growth'. *Oxford Economics Papers*, 65: 96–123.
- ENCLA (2014). *Informe de Resultados Octava Encuesta Laboral*. Dirección del Trabajo. Santiago: Ministerio del Trabajo y Previsión Social, Gobierno de Chile.
- Ffrench-Davis, R. (2018). *Reformas económicas en Chile 1973–2017*. Santiago: Penguin Random House Grupo Editorial Chile.
- Gaentzsch, A., and G. Zapata Román (2018). 'More Educated, Less Mobile? Diverging Trends in Income and Education Mobility in Chile and Peru'. *Journal of Income Distribution*, 27: 66–105.
- Gammage, S., T. Albuquerque, and G. Durán (2014). *Inclusive Labour Markets, Labour Relations and Working Conditions Branch*. Geneva: International Labour Office.
- Herrendorf, B., R. Rogerson, and Á. Valentinyi (2014). 'Growth and Structural Transformation'. In P. Aghion and S.N. Durlauf (eds), *Handbook of Economic Growth*. New York: Elsevier.
- ILO (2019). *Decent Work*. Geneva: International Labour Organization.
- Jadresic, E. (1986). *Evolución del empleo y desempleo en Chile, 1970–85*. Santiago: Colección estudios CIEPLAN.
- Jorratt, M. (2009). *La tributación directa en Chile: equidad y desafíos*. Santiago: CEPAL.

- Kremerman, M., G. Durán, and A. Páez (2017). ‘Productividad, calidad del empleo y los institutos laborales’. In *Chile: Desafíos de La Productividad y El Mundo Laboral*. Santiago: Organización Internacional del Trabajo.
- López, R., E. Figueroa, and P. Gutiérrez (2013). ‘La “Parte del León”: Nuevas estimaciones de la participación de los super ricos en el ingreso de Chile’. Working Paper 32. Santiago: Departamento de Economía, Universidad de Chile.
- Lüders, R., J. Díaz, and G. Wagner (2016). *La República en cifras: Historical statistics*. Santiago: Ediciones UC.
- McMillan, M.S., and D. Rodrik (2011). ‘Globalization, Structural Change and Productivity Growth’. Working Paper 17143. Cambridge, MA: National Bureau of Economic Research.
- MIDEPLAN (1998). *Evolución de la Pobreza e Indigencia en Chile 1987–1996*. Santiago: Gobierno de Chile.
- Montero, R., and P. Garcés (2009). ‘¿Existe discriminación salarial contra la población indígena en Chile?’ *El Trimestre Económico*, 76: 645–69.
- OECD (2016). *Chile: Policy Priorities for Stronger and More Equitable Growth*. Paris: OECD Publishing.
- OECD (2018a). ‘Income Distribution and Poverty: Overview’. Available at: www.oecd.org/social/inequality.htm#income (accessed 25 July 2018).
- OECD (2018b). ‘Chile’. In *Education at a Glance 2018: OECD Indicators*. Paris: OECD Publishing.
- OECD (2019). ‘Education GPS’. Available at: <http://gpseducation.oecd.org> (accessed 4 January 2019).
- OECD and UN (2018). *Production Transformation Policy Review of Chile: Reaping the Benefits of New Frontiers, OECD Development Pathways*. Paris: OECD Publishing.
- PNUD (2017). *Desiguales. Orígenes, cambios y desafíos de la brecha social en Chile*. Santiago: Programa de las Naciones Unidas Para el Desarrollo.
- Rodrik, D. (2016). ‘Premature deindustrialization’. *Journal of Economic Growth*, 21: 1–33.
- Sen, K. (2014). ‘Inclusive Growth: When May We Expect It? When May We Not?’. *Asian Development Review*, 31: 136–62.
- Simoes, A.J.G., and C.A. Hidalgo (2011). ‘The Economic Complexity Observatory: An Analytical Tool for Understanding the Dynamics of Economic Development’. In *Workshops at the Twenty-Fifth AAAI Conference on Artificial Intelligence*, 7–11 August 2011, San Francisco, CA.
- Solimano, A. (2012a). *Chile and the Neoliberal Trap: The Post-Pinochet Era*. Cambridge: Cambridge University Press.
- Solimano, A. (2012b). *Capitalismo a la chilena: Y la prosperidad de las élites*. Santiago: Editorial Catalonia.
- Solimano, A. (2016). *Global Capitalism in Disarray: Inequality, Debt, and Austerity*. Oxford: Oxford University Press.
- Solimano, A. (2017). *Pensiones a la chilena*. Santiago: Editorial Catalonia.
- Solimano, A. (2018). ‘Estrategia de Desarrollo Económico en Chile: Crecimiento, Pobreza Estructural y Desigualdad de Ingresos y Riqueza’. In *Chile Del Siglo XXI: Propuestas Desde La Economía*. Berlin: Heinrich Böll Stiftung and Estudios Nueva Economía.
- Solimano, A. (2020). *A History of Big Recessions in the Long Twentieth Century*. Cambridge: Cambridge University Press.

- Solimano, A., and D. Calderón Guajardo (2015). 'Economic Inequality and Macroeconomic Cycles: Evidence for Latin America'. Santiago: UN-ECLAC.
- Solimano, A., and D. Calderón Guajardo (2017). 'The Copper Sector, Fiscal Rules and Stabilization Funds in Chile@ Scope and Limits'. UNU-WIDER Working paper 2017/53. Helsinki: UNU-WIDER.
- Solimano, A., and M. Schaper (2014). 'The Paradoxes of Chilean Economic Development: Growth, Inequality, Deindustrialisation and Sustainability Risks'. In *Emerging Economies and Challenges to Sustainability*. London: Routledge.
- Solow, R.M. (1956). 'A Contribution to the Theory of Economic Growth'. *Quarterly Journal of Economics*, 70: 65–94.
- SONAMI (2019). *Estadísticas de precios*. Santiago: Sociedad Nacional de Minería.
- Sumner, A. (2017). 'The Developer's Dilemma: The Inequality Dynamics of Structural Transformations and Inclusive Growth'. Paper presented at the *Global Poverty and Inequality Dynamics Research Network Workshop*, Bangkok, 10 September 2019. London: Global Poverty and Inequality Dynamics Research Network.
- Sunkel, O., and C. Cariola (1982). *Un Siglo de Historia Económica de Chile, 1830–1930: Dos Ensayos y una Bibliografía*. Madrid: Ediciones de Cultura Hispánica.
- Timmer, M.P., G.J. de Vries, and K. de Vries (2015). 'Patterns of Structural Change in Developing Countries'. In J. Weiss and M. Tribe (eds), *Routledge Handbook of Industry and Development*. London: Routledge
- Torche, F. (2014). 'Intergenerational Mobility and Inequality: The Latin American Case'. *Annual Review of Sociology*, 40: 619–42.
- UNU-WIDER (forthcoming). Standardised World Income Inequality Database. [Database]
- World Bank (2019a). 'World Development Indicators'. Available at: <https://databank.worldbank.org/reports.aspx?source=world-development-indicators> (accessed on 20 September 2019).
- World Bank (2019b). 'Poverty Headcount Ratio at National Poverty Lines (% of Population): Chile'. Available at: <https://data.worldbank.org/indicator/SI.POV.NAHC?locations=CL> (accessed 8 July 2018).
- World Bank (2019c). 'PovcalNet: The On-Line Tool for Poverty Measurement Developed by the Development Research Group of the World Bank'. Available at: <http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx> (accessed on 20 September 2019).

Appendix

Figure A1: GDP growth rate for Chile, 1987–2015



Note: annual percentage growth rate of GDP at market prices based on constant local currency.

Source: authors' creation, based on World Bank data.