

Pro-Productivity Policies in Chile since 1958

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Abstract

This paper traces the evolution of Chile's pro-productivity policies from 1958 to 2025 and analyses how shifts in political and institutional regimes shaped the country's growth and economic performance in general. It applies the van Ark et al. (2023) framework, examining four policy domains—capital accumulation, structural transformation, markets and internationalisation—underpinned by macroeconomic and institutional fundamentals across three historical phases: the inward-oriented state-led model (1958–1973), the liberalisation and adjustment period under military rule (1973–1990), and the democratic consolidation phase (1990–2025). While Chile succeeded in correcting macroeconomic distortions and attracting investment, it struggled to sustain productivity growth after the early 2000s. The analysis reveals that first-generation reforms enabled strong catch-up growth, but later gains proved elusive in the absence of sufficient innovation capacity, institutional coordination, and dynamic efficiency. The paper also addresses challenges in measuring total factor productivity over time, highlighting the limitations of internationally harmonised datasets and the importance of adjusting metrics to reflect country-specific conditions.

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1 Introduction

Few countries in Latin America have implemented such a wide-ranging transformation of their development model as Chile. Over recent decades, Chile successfully transitioned from a highly protected, state-led economy to one of the region's most open and stable markets, achieving significant gains in income levels and social indicators (OECD, 2025). Chile's progress since 1958 is hard to overstate. Since 1958 Chile has experienced sharp improvements in virtually all socioeconomic indicators, which reflect the radical and deep reshaping of the Chilean economy and its society over this period (Table 1.1). Yet the country has struggled to fully escape the so-called “middle-income trap”, with productivity growth slowing markedly over the past 20 years (Bravo-Ortega et al., 2023; Corbo & González, 2014). Chile therefore offers remarkable insights as a case study of productivity policies.

Table 1.1: Chile's selected social indicators (1960s-2020s)

Indicator	1960	1970	1980	1990	2000	2010	2020
GDP per capita (2015 USD)	3,330	4,040	4,910	5,343	10,104	13,631	14,227
Poverty rate (%)	—	<20 (est.)	—	38.6	13.7 (2006)	8.6 (2017)	10.8
Gini index	—	0.56 (est.)	—	0.55	0.54 (2006)	0.45	0.449
Under-5 mortality (per 1,000)	120	88	44	17	11	7	6.7
Life expectancy (years)	57	64.4	69.8	73.7	78.5	80.3	81.2
Exports (% of GDP)	11.9	7.3	11.2	25.4	33.8	24.7	28.2
Investment (% of GDP)	15 (est.)	8.6	15 (est.)	21	24	23	23.0
Primary enrollment (% gross)	—	127.4	109	100	100	99	100.2
Secondary enrollment (% gross)	—	56.8	61.9	72.2	92.9	104.1	106
Tertiary enrollment (% gross)	—	14.2	11.0	21.2	49.4	93.1	99.3
Literacy rate (%)	—	—	—	94.3	95.7	96.8	97.2

Note: GDP per capita is expressed in constant 2015 USD. Source: Poverty, inequality, mortality, education and other values come from World Bank World Development Indicators, UNESCO Institute

of Statistics, Central Bank of Chile, and national household surveys (e.g. CASEN). Missing data is replaced by the closest available year or a documented estimate.

This paper analyses the evolution of Chile's productivity-related policies over the past 67 years and suggests some keys to boosting productivity in the future. To organise the analysis, the 1958–2025 period is divided into three major phases, each marked by distinct political and economic regimes:

1958–1973: A period characterised by state-led industrialisation, growing state intervention, and the Agrarian Reform, culminating in a 3-year experiment with socialism.¹

1973–1990: The military dictatorship under Augusto Pinochet, during which market-friendly reforms were implemented forcefully, shifting the development model toward liberalisation, deregulation, and openness to international trade.

1990–2025: A return to democratic rule marked by a pragmatic blend of market-based policies with incremental institutional reforms and expansion of social programmes aimed at fostering social cohesion and inclusiveness.

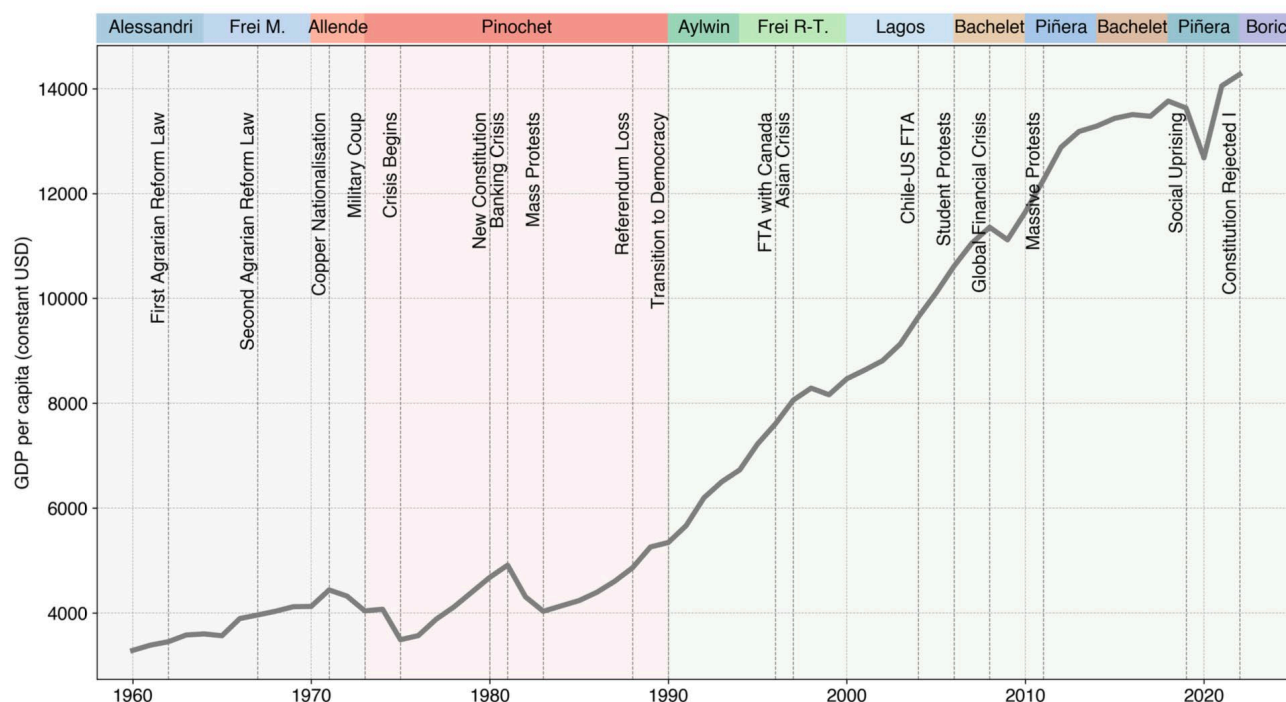
Of course, alternative time periods are also reasonable. For instance, when analysing the shifting sources of GDP growth, Chumacero and Fuentes (2005) contrast the modest growth rates of the sixties with the period from 1985 until 1998, driven by Total Factor Productivity (TFP). The classification adopted here, by contrast, focuses not on outcomes, which generally follow policies with varying lags, but on broad shifts in policy orientation and the state's role in shaping productivity.

Figure 1.2 decomposes GDP growth into the contributions of labour input (hours growth weighted by the average labour share) and labour productivity. Panel 1.2a) shows the three political periods; panels 1.2b–1.2d split each period into non-overlapping 4-year periods to highlight within-period dynamics.

Overall, the figure motivates the periods chosen for the analysis: regime changes coincide with shifts in the composition and stability of growth. The 1990s delivered a one-off surge in both factors; since then, labour input has carried a larger share of growth while labour productivity has trended down, foreshadowing the policy questions addressed in the rest of the paper.

1 The inclusion of the Unidad Popular government (1970–1973) in this period is debatable, given its sharp break with the moderate approach of the preceding 12 years. Section 2.2 discusses this choice.

Figure 1.1: Real Gross Domestic Product (GDP) per capita and significant events (1958–2024).

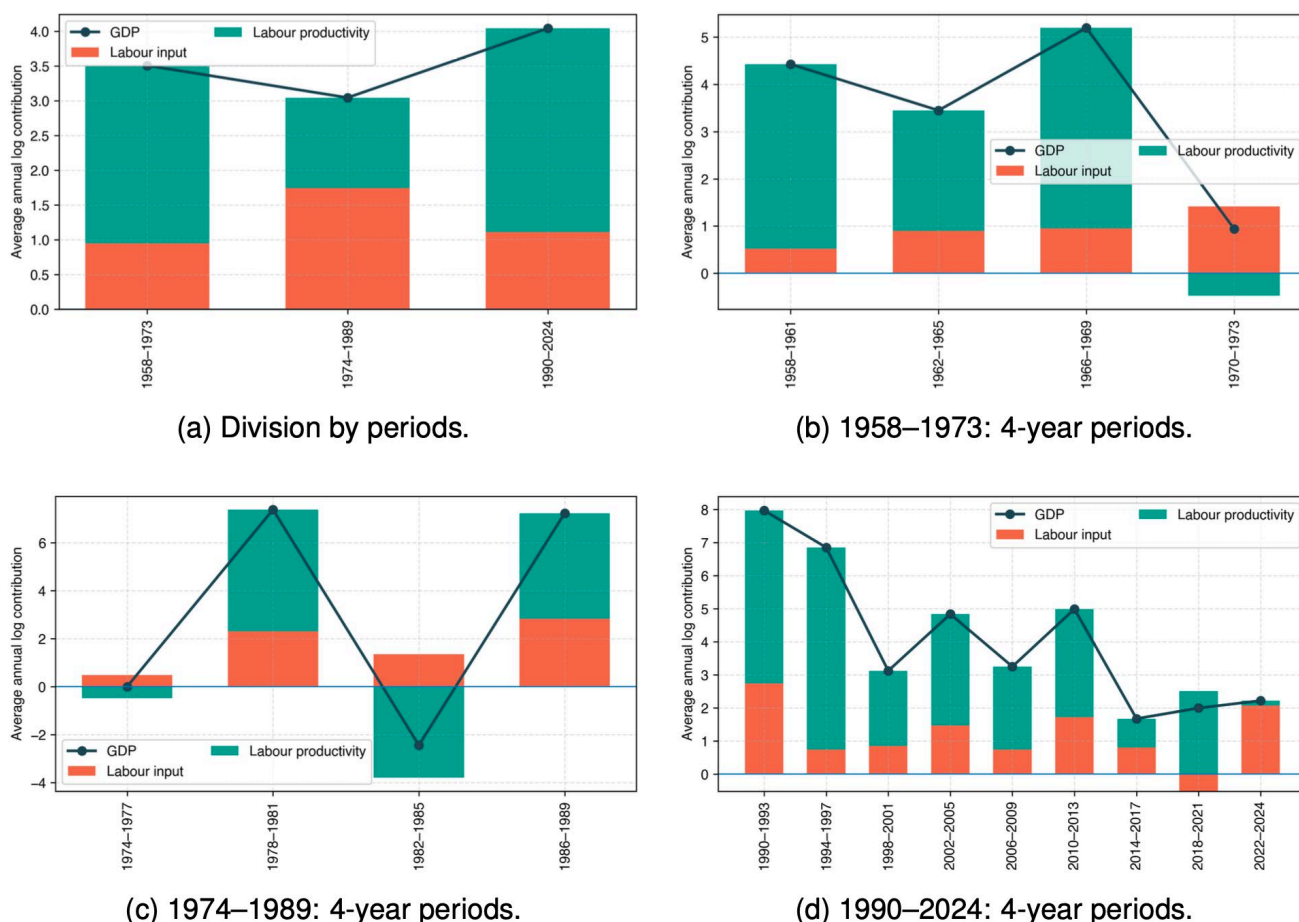


Chile GDP per capita in constant 2015 dollars (1960–2022), selected relevant events and presidencies. Source: The World Bank and author's elaboration.

To assess these policies systematically, the paper applies the framework developed by van Ark et al. (2023), which categorises pro-productivity policies into four domains—factor accumulation, technological and structural change, markets and resource allocation, and internationalisation—underpinned by macroeconomic and institutional fundamentals. The framework also distinguishes between country archetypes based on productivity performance: advanced but slowing economies, lagging but growing economies, and lagging and stagnating ones. This taxonomy offers a useful lens to evaluate Chile's shifting trajectory.

Understanding the current trends requires some historical context. In the early twentieth century, Chile was a poor and highly vulnerable economy, dependent on exports of natural nitrate and copper (Díaz-Bahamonde, 2021; O'Brien, 1989). The collapse of global markets during the Great Depression triggered a dramatic contraction: export revenues plummeted and by 1932, GDP per capita had halved (Lüders, 1998; Schmidt-Hebbel, 2006). The policy response and recovery strategy consisted in import substitution industrialisation, protectionism, and an inward-looking overall approach (Meller, 2016).

Figure 1.2: GDP growth decomposition for different periods.



Note: GDP growth decomposition by political periods using annual Törnqvist contributions. *Source: Penn World Table (1958–1989); CNEP (1990–2024).*

Later, Cold War geopolitics and intense domestic polarisation shaped Chile's economic path. The protectionist model failed to deliver sustained growth, and mounting social tensions culminated in the collapse of democracy in 1973 and a 17-year military regime. The authoritarian government implemented radical free-market reforms, following the advice of University of Chicago-trained economists. These reforms were initially destabilising, but laid the foundation for exceptional growth in the subsequent decades (Saieh & Sjaastad, 1986; Schmidt-Hebbel, 2006).

Between 1990 and the mid-2000s, Chile more than doubled its income per capita, sharply reduced poverty, expanded access to education and healthcare, and modernised its infrastructure (Comisión Nacional de Evaluación y Productividad [CNEP], 2024; OECD, 2025) (see table 1.1). The country became a role model for economic reform in Latin America and other developing economies, combining market openness, macroeconomic stability, and social progress. However, the momentum was not sustained, as growth has declined markedly in the

last decade. Notably, the slowdown in productivity had started in the mid-2000s, but was masked by record-high copper prices that sustained high investment rates and GDP growth approximately until 2014. This may have delayed effective policy responses.

The slow productivity growth of the last 20 years exposed Chile's weaknesses in key drivers of productivity growth, which must be addressed going forward:

1. Entrepreneurial innovation is lacking, which limits dynamism and productivity gains from potential further reallocation.
2. Insufficient education quality impedes the emergence of a highly skilled workforce, despite a massive increase in higher education coverage.
3. The regulatory framework has gradually become significantly more complex, thereby eroding Chile's business-friendliness by blocking investment and damaging competitiveness in high-potential sectors.

The historical analysis presented in subsequent sections shows that these three drivers evolved differently across the three periods but eventually converged in ways that now constrain Chile's prospects. Innovation generally took a back seat throughout Chile's economic cycles and followed a broadly flat trajectory. Education coverage rose steadily: Chile achieved near-universal primary enrolment in the 1970s, followed by broad secondary coverage in the 2000s and mass tertiary enrolment in the 2010s. The quality of education, however, did not keep pace with the quantitative expansion. The business environment deteriorated until 1973, after which the military government moved towards free markets. Following the return to democratic rule in 1990, environmental and other protections were strengthened, but the regulatory framework expanded without sufficient safeguards against excessive burdens on investment and economic dynamism.

The rest of the paper is organised as follows. Sections 2–4 briefly present the main political and economic events of each period and discuss the policies relevant to productivity. Section 5 examines the main constraints on productivity today. Section 6 applies the framework of van Ark et al. (2023) to Chile's experience and draws implications for future policy. Appendix A discusses the productivity data and the choice of series used in the analysis.

2 1958–1973: The period of the *Three Thirds*

2.1 The lead-up to the 1960s

In the early twentieth century, Chile remained a vulnerable and highly concentrated economy, overwhelmingly dependent on the export of natural nitrates. This dependence made the country acutely exposed to external shocks. The First World War disrupted international trade flows, but it was the Great Depression that produced the most catastrophic effects. Between 1929 and 1933, Chile experienced, arguably, the deepest economic contraction ever recorded in the world (Schmidt-Hebbel, 2006), with GDP falling by more than 40% between 1929 and 1932 and export revenues collapsing to a fraction of their pre-crisis levels. The social consequences were severe: mass unemployment, urban poverty, and political radicalisation intensified, destabilising

the traditional political order.

In response to this profound shock, Chilean policymakers embarked on a major reorientation of the country's development model. Beginning in the 1930s and consolidating after the Second World War, Chile adopted a domestic-oriented strategy centred on Import Substitution Industrialisation (ISI). Significant barriers to international trade were put in place, state-owned enterprises were established in strategic sectors such as steel, electricity, and petroleum refining, and public investment expanded into infrastructure and basic services. The state, primarily through Corporación de Fomento de la Producción (CORFO), became the main driver of the country's industrialisation efforts (Meller, 2016).

This strategy yielded some successes. Industrial production expanded, urbanisation accelerated, and access to education and basic public services improved. However, structural weaknesses soon emerged (Pinto, 2018). Protectionism and state intervention distorted resource allocation by boosting inefficient industries permanently reliant on government support, and entrenched rent-seeking behaviour (Meller, 2016). Productivity growth remained low across most sectors, and chronic inflation, fiscal deficits, and balance-of-payment vulnerabilities became endemic features of the economy.

Political turmoil further complicated the situation. As highlighted in Nazer (2021), the postwar period was characterised by popular dissatisfaction and mounting pressure from organised labour and social movements. Although democratic procedures remained intact, deep divisions between the left, the centre, and the right produced a legislative deadlock and prevented the formation of stable governing coalitions. The monetary financing of deficits, used repeatedly to resolve distributional conflicts, sustained high inflation rates.

The intellectual consensus at the time, heavily influenced by economists from Comisión Económica para América Latina y el Caribe (CEPAL)² such as Prebisch (1950), Pinto (2018), and Ahumada (1958), diagnosed Chile's challenges as structural: chronic external dependency, low productivity, and unequal distribution of income (Nazer, 2021, p. 185-186). However, while the need for deep reform was widely acknowledged, political divisions over the nature and pace of these reforms deepened and made significant consensus unlikely.

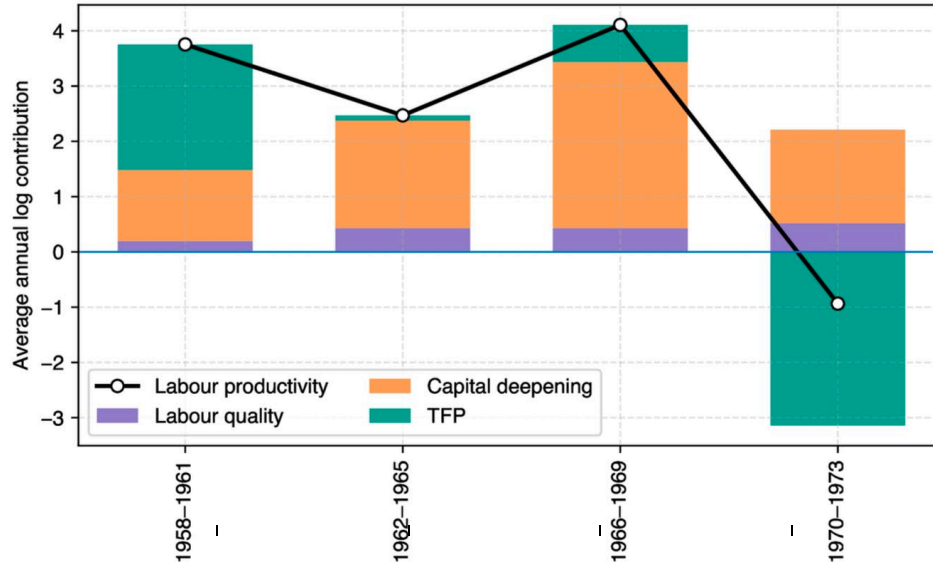
2.2 Politics and economic policies in 1958–1973

Having described the institutional decay of the ISI model, we now turn to the political and economic responses that shaped the 1960s and early 1970s. The period between 1958 and 1973 was marked by deepening political polarisation and increasingly ambitious but unstable attempts to modernise the Chilean economy. Political divisions reflected a broader Cold War context: conservatives defended the existing order and Chile's ties to the West; the growing left sought to align Chile with socialist models; and the Christian Democrats attempted a centrist modernisation project (Ffrench-Davis, 2002; Meller, 2016). Chile's ideological map converged

² Economic Commission for Latin America and the Caribbean (ECLAC).

into bitterly divided “three thirds”, i.e. three large political forces, making broad-based governance difficult.

Figure 2.1: Decomposition of labour productivity growth 1958–1973 (contribution to labour productivity (real GDP per hour worked) growth 1958–1973 in 4-year periods)



Source: Feenstra et al., 2015.

Against this backdrop, successive governments implemented a range of policies that reshaped the economic landscape, often with conflicting impacts on productivity.

Admittedly, the more radical policies of the Unidad Popular (UP) government³ (November 1970–September 1973) differ substantially from the moderate approach of the previous 12 years, challenging the coherence of this periodisation. Nonetheless, treating 1958–1973 as a unified phase allows for a more meaningful analysis than isolating a significant yet relatively brief episode whose policies were swiftly and comprehensively reversed soon afterward.

2.2.1 Government-led industrial policy

Governments between 1958 and 1973 emphasised substantial public investments in infrastructure and expansions of education coverage (Meller, 2016; Nazer, 2021). Infrastructure spending increased to support industrialisation and rural modernisation, with large-scale projects in transport, energy, particularly hydroelectric dams and port facilities often coordinated through CORFO’s leadership. Public investment rose markedly during this period,

³ The *Unidad Popular* (Popular Unity) coalition was formed in 1969 by the Partido Socialista (PS), the Partido Comunista (PC), the Partido Radical (PR) and the Partido Socialdemócrata (PSD), the United Popular Action Movement (a left-wing splinter from the Christian Democrats) and *Acción Popular Independiente*.

reaching approximately 12% of GDP by 1972 (Meller, 2016; Nazer & Llorca-Jaña, 2020).

Private investment was curtailed by important distortions in financial markets. Negative real interest rates, administrative controls on credit, and regulatory discrimination against private banking weakened the financial sector's capacity to support investment efficiently. These policies eroded the incentives for savings and investment, exacerbating the challenges faced by the Chilean economy during this period.

Industrial policy was dominated by the expansion of CORFO's role in promoting domestic industry. Governments continued to invest heavily in "strategic industries", including steel production with Compañía de Acero del Pacífico (CAP), oil exploration and refining in Empresa Nacional del Petróleo (ENAP), and electricity generation with Empresa Nacional de Electricidad (ENDESA). CORFO provided these sectors with direct investment, preferential credit, and subsidised inputs, seeking to establish a diversified industrial base capable of reducing Chile's traditional dependence on commodity exports (Jefferies, 1971; Mamalakis, 1967; Meller, 2016). Although these initiatives expanded Chile's manufacturing capabilities, their impact on external competitiveness was limited, as the industries remained heavily protected and inward-oriented.

2.2.2 Education and human capital

Simultaneously, educational access broadened considerably. Primary schooling approached universality, and secondary enrolment rose from approximately 14% in 1960 to nearly 50% by 1970, driven in large part by reforms introduced during Eduardo Frei Montalva's administration that were aimed at promoting social inclusion (Ffrench-Davis, 2002).

Nevertheless, these efforts did not fully translate into proportional gains in human capital quality. Vocational and technical training programmes remained limited in scale, reaching only a small fraction of the workforce.

2.2.3 The agrarian reform

The agrarian reform represented the most significant structural policy of the period. Land transfers began in earnest under Frei's administration with the Agrarian Reform Law of 1967 and accelerated dramatically under the UP government. The reform expropriated thousands of large estates, dismantling the traditional latifundio system (Ffrench-Davis, 2002; Jarvis & Vera-Toscano, 2004).⁴ By 1973, most of the agricultural land plots above 80 hectares in surface had been redistributed, mostly through cooperatives or *asentamientos*. However, productivity

⁴ Nominally the reform started in 1962 under the Alessandri government with Law No. 15,020, which allowed the expropriation of large estates and redistribution of land. This initial phase was modest and focused on the settling of southern regions and development rather than on massive redistribution.

gains from land redistribution proved uneven and difficult to sustain.

While initial increases in output were observed on some reformed properties during the late 1960s, many new landholders lacked sufficient access to credit, technical assistance, and modern inputs to fully modernise agricultural production. The economic turbulence of the early 1970s further undermined efforts to develop a more dynamic and equitable rural economy (Jarvis & Vera-Toscano, 2004; Kay, 1998).

2.2.4 Market distortions

Economic policies significantly distorted resource allocation mechanisms. Price controls on basic goods, that had expanded in the 1960s, became extensive in 1970–1973. These controls, intended to curb inflation, often led to shortages and the emergence of black markets, undermining market signals and contributing to economic imbalances (de Vylder, 1976).

As mentioned above, credit allocation was also affected. Initially constrained by stringent regulations and rationing, the financial sector underwent further transformation with the nationalisation of banks under Allende's administration. This shift led to credit distribution that increasingly reflected political priorities rather than market assessments, diminishing the efficiency of capital allocation.

The state's expanding role in industrial production, underscored by the expropriation of key firms, led to a decline in private sector confidence and investment levels post-1970.

Labour-market policies, particularly in the late 1960s and early 1970s, reinforced economic rigidities. Legislation enacted in 1966 significantly curtailed employers' ability to dismiss workers, while the Allende administration introduced sharp mandated wage increases. Although these measures sought to enhance equity and improve working conditions, they ultimately contributed to growing inefficiencies in resource allocation and labour-market functioning (Kaufman, 1972).

The Allende government marked the acceleration of labour-market distortions due to strong unionisation drives, administrative wage-setting, and aggressive labour mobilisation campaigns. These factors limited labour mobility and firm-level flexibility, contributing to the misallocation of labour resources. Organised labour mobilisation was also instrumental in the aforementioned Government's takeover of strategic firms, which further entrenched state control over the economy.

2.2.5 Internationalisation

During the 1958–1973 period, Chile's commitment to ISI led to a progressively closed economy, reversing earlier modest attempts at trade liberalisation. Alessandri's (1958–1964) initial attempts to reduce trade barriers were limited and short-lived, as protectionist pressures regained dominance. Subsequent administrations under Frei Montalva (1964–1970) and Allende (1970–1973) further entrenched this inward approach. Tariff rates increased significantly, often exceeding 100% for many goods, while non-tariff barriers, such as import

quotas and licensing requirements, proliferated (Ffrench-Davis, 2002). By the early 1970s, Chile had one of the most restricted trade regimes in Latin America, with exports accounting for less than 15% of GDP, heavily concentrated in copper (Meller, 2016).

Foreign Direct Investment (FDI) faced severe constraints, peaking in the UP period, which prioritised state control over key industries. The nationalisation of major foreign-owned enterprises, notably in the copper mining sector, marked a turning point. In 1971, the Allende administration nationalised the large U.S.-owned copper mines (González & Vial, 2021). These actions, alongside the expropriation of other foreign investments in banking and manufacturing, severely damaged Chile's international reputation and deterred investment. By 1973, net FDI flows had plummeted to near zero, exacerbating balance-of-payments pressures and contributing to economic instability (Schmidt-Hebbel, 2006).

This retreat from international markets had profound implications for productivity. Isolation from global markets shielded domestic industries from competitive pressures, reducing incentives for technological innovation and operational efficiency. The lack of access to foreign capital and technology further constrained industrial upgrading, while reliance on copper exports left the economy vulnerable to global price fluctuations.

2.2.6 Institutional weakening

Perhaps the most damaging legacy of the later part of this period for productivity growth was the erosion of institutional capacity. Inflation, already entrenched by the late 1950s, accelerated sharply during the UP government, reaching triple-digit annual rates by 1973 (Meller, 2016). Fiscal deficits widened due to expansive social programmes and public sector wage increases, funded largely through monetary emissions.

Property rights eroded as the scope of expropriations expanded beyond land into industrial and commercial sectors. Legal disputes challenging administrative discretion increased, and confidence in long-term contracts declined (Ffrench-Davis, 2002). Political polarisation and legislative paralysis eliminated possibilities for consensus economic policymaking, pushing Chile into an institutional crisis.

By early 1973, macroeconomic imbalances were evident. The fiscal deficit reached 22% of GDP (Velasco, 1991), with inflation accelerating and surpassing 400%. The combination of macroeconomic instability, distorted market mechanisms, declining private sector confidence, and institutional erosion culminated in an economic and political collapse, setting the stage for the dramatic policy shifts that would follow the military coup of 1973.

3 The military dictatorship of 1973–1990

The military coup of September 1973 marked a dramatic rupture in Chile's political and economic trajectory. The newly established dictatorship, led by General Augusto Pinochet, abandoned the protectionist approach, state-led development model and shifted drastically toward free-market policies. Drawing heavily on the recommendations of young economists

trained at the University of Chicago, dubbed the “Chicago Boys”, the regime undertook sweeping reforms aimed at liberalising markets, dismantled the state’s economic role, and ultimately established macroeconomic stability (Edwards, 2025; French-Davis, 2008; Meller, 2016).⁵

From 1975 onward, the *Junta* put the ideas of Chicago-style economics into practice in a sweeping experiment in radical free-market reforms. Although the implementation of these ideas fell short of full orthodoxy, the regime applied the new framework with unprecedented thoroughness. For many years, the results of this experiment were disappointing. Inflation proved far more resistant than anticipated, and the initial “shock therapy” triggered a deep recession in 1975. Later, poor financial supervision and a permissive attitude toward foreign-denominated private debt contributed to a devastating banking and balance-of-payments crisis in 1982. Over the entire period, poverty remained persistently high (see Table 1.1) and inequality soared: as late as 1987, the poverty rate still hovered around 45% (Contreras et al., 2001).

3.1 Main economic policies in 1973–1990

Key measures implemented during this period included:

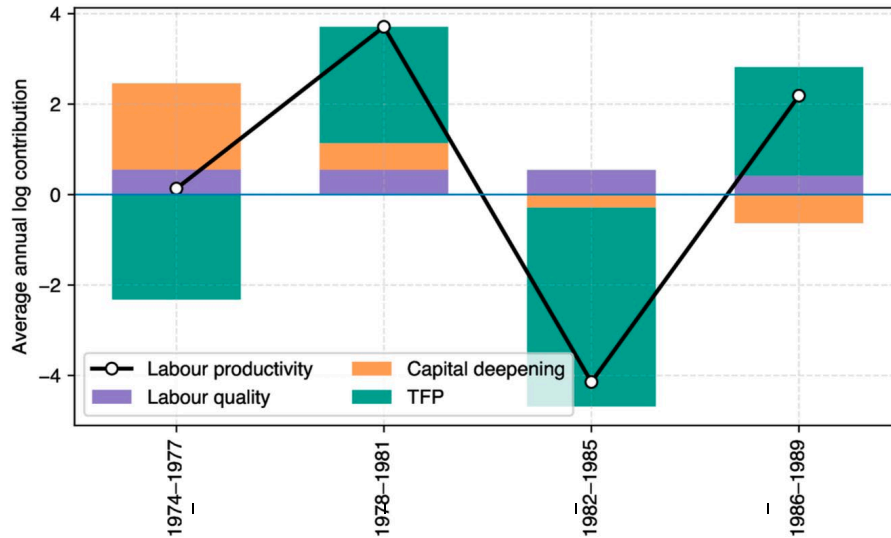
- The reprivatisation of companies and lands expropriated between 1970 and 1973, along with the broader privatisation of many CORFO-founded enterprises.
- Severe reductions in fiscal spending, including cuts to social programmes and a significant shrinking of the public sector payroll, both in terms of wages and employment.
- Comprehensive tax reforms: tariffs were lowered and homogenised, wealth and capital gains taxes were abolished, and a uniform 20% Value-Added Tax (VAT) was introduced as the main revenue source.
- Education reform: municipalisation of public schools and introduction of free-enterprise voucher-subsidised private schools.
- Labour-market deregulation, which weakened union power, relaxed firing regulations, and dismantled existing labour protections.
- Comprehensive price liberalisation and elimination of most non-tariff barriers to trade.
- Far-reaching financial sector liberalisation, although initially lax regulation contributed to financial instability.

The reforms, disruptive and painful for many years, did lay the groundwork for Chile’s growth in

The training of the Chicago Boys was the result of a previous U.S. State Department initiative to spread free-market thinking in Latin America. Through a partnership between the University of Chicago and Universidad Católica, Chilean students were sponsored to study under Milton Friedman, Arnold Harberger and others, with the goal of introducing free-market ideas into Chile’s economic mainstream thinking.

the decades to come, when the country returned to democratic rule.

Figure 3.1: Decomposition of labour productivity growth 1974–1989 (contribution to labour productivity (real GDP per hour worked) growth 1974–1989 in 4-year periods)



1989 Source: Feenstra et al., 2015.

3.1.1 Deregulation and liberalisation

Markets rapidly took the primary role in virtually all aspects of the economy, as the state receded after the September 1973 coup. Goods markets, heavily repressed during the UP years, started operating freely.

Labour-market reforms were among the most radical. Union protections were dismantled, unionisation rates declined, and dismissal regulations were relaxed. Labour costs were reduced, in part through the lowering of social security contributions. As a result, real wages fell by approximately 30% between 1973 and 1975. (Meller, 2016).

The financial sector also experienced sweeping liberalisation. Selective credit controls were abolished, reserve requirements were lowered, non-bank financial institutions were encouraged, and international banks were allowed entry (Velasco, 1991). Nevertheless, the initial deregulation proved excessive, culminating in the recession of 1981–1982.⁶ Afterwards, the government adopted a more pragmatic, stricter regulatory framework prioritising banking stability over competition.

⁶ The real effects of the debt crisis were enormous: GDP fell by 15% and unemployment approached 30%, fuelling social unrest and contributing to the discrediting of the military regime.

The 1981 pension reform boosted national savings and deepened financial markets, broadening the limited financing options available to domestic firms. According to Corbo and Schmidt-Hebbel (2003), the reform contributed an estimated 0.49 percentage points to Chile's average annual GDP growth between 1981 and 2001.

Investment policies were radically liberalised. Strong protections for FDI were enshrined in Decree 600 (D.L. 600), which guaranteed tax invariability, unrestricted repatriation of capital, and minimised sectoral restrictions. The domestic investment climate similarly improved through deregulation and an emphasis on private initiative.

In the energy and resource sectors, significant privatisations were carried out. The non-metallic mining industry, exemplified by the sale of Sociedad Química y Minera de Chile (SQM), was transferred to private ownership, and most of the energy generation assets were privatised. However, copper production remained under state control through Corporación Nacional del Cobre de Chile (CODELCO) (CODELCO, 2023).

3.1.2 Education reform

The government transferred public schools from the central level to municipalities. A voucher system was introduced, providing equal funding to municipal and privately managed subsidised schools. In this framework, competition was supposed to ensure the quality of education by weeding out low-performing establishments (Arellano, 2001; Torche, 2005).

At the tertiary level, the liberalisation of higher education led to the creation of numerous private universities, fundamentally reshaping the sector.

3.1.3 Industrial policies and innovation

Regarding industrial policy, the government abandoned the ISI model, relying instead on competitive pressures arising from international trade liberalisation and deregulation to drive structural change. Nevertheless, selective support was maintained in a few strategic sectors. Public investments in irrigation infrastructure and early stage research, often through entities such as Fundación Chile (FCH), supported the development of internationally competitive industries like fruit production, forestry, and salmon farming (Agosin & Bravo-Ortega, 2009; Lebdioui, 2019).

Innovation policies were minimal and circumscribed to a handful of active industrial development initiatives, as market forces were supposed to drive technological adoption in the private sector. Universities were tightly controlled by the military to suppress adverse political activities, leading to an environment and internal politics unconducive to scientific and technological development.

The opening of the economy and the removal of subsidies and protectionist barriers triggered a massive reallocation of resources. Many inefficient firms, particularly in the manufacturing sector, went bankrupt, allowing more competitive sectors to expand.

3.1.4 Policies for internationalisation

Trade policy underwent a fundamental reorientation. Tariffs were unilaterally reduced to a uniform 10% by 1979, and most non-tariff barriers to trade were eliminated. A nominal exchange rate peg was introduced in 1979 as part of an effort to stabilise inflation. However, the overvaluation of the peso contributed to the severity of the debt crisis of 1981–1982 (Saieh & Sjaastad, 1986).⁷

While trade liberalisation advanced steadily, Chile's international economic relations were initially affected by diplomatic isolation and reputational damage stemming from the human rights record of the military regime. Some Western countries downgraded relations and distanced themselves diplomatically. Nevertheless, trade flows remained resilient, and foreign direct investment eventually expanded in the late 1970s and 1980s, as economic liberalisation policies took hold.

3.1.5 Institutional reforms

The military regime restructured macroeconomic and institutional frameworks with lasting effects. The tax system modernised with the introduction of the VAT as the primary revenue source, while public spending was curtailed, contributing to greater fiscal discipline (Ffrench-Davis, 2002). A major reform was the establishment of an autonomous Central Bank in late 1989 shortly before the transition to democracy.

3.2 The Pinochet years in perspective

The 1973 coup not only marked a political rupture but also ushered in a complete reorientation of Chile's development model. In place of the strategy of previous decades, the military regime pursued a far-reaching experiment in market liberalisation, spearheaded by a generation of young technocrats. What followed was a period of structural transformation that would redefine the country's economic trajectory for decades to come.

Nevertheless, the reforms also came with high social and institutional costs. The dismantling of traditional social protections, the weakening of collective bargaining, and the sharp rise in income inequality became enduring legacies of the period (Ffrench-Davis, 2008).

The economic policies between 1973 and 1989 profoundly transformed Chile's economic structure. While they laid the foundation for future growth and stabilisation, they also introduced significant vulnerabilities and social tensions, many of which would shape the

⁷ The devaluation fuelled the wave of mass bankruptcy, as private credit in US dollars had been actively encouraged.

challenges faced during the democratic period after 1990.

The harsh social consequences of the reforms, including declining real wages, weakened social protection, rising unemployment, and growing discontent; also proved fateful when widespread protests started in 1983, overtly defying the regime. Popular mobilisation, combined with mounting international pressure, played a key role in Pinochet's decision to gamble his continuity on a plebiscite in 1988 (Garretón, 2023). The return to democracy in 1990 introduced a new tension between social inclusion and competitiveness, which shaped the next generation of productivity policies.

4 Democratic renewal: 1990–2025

4.1 The politics of the regained democracy

The democratic transition inaugurated in 1990 marked a major shift in Chile's political and economic trajectory. In the October 1988 plebiscite, General Pinochet was defeated, paving the way for open elections that brought opposition candidate Patricio Aylwin to power in 1990. Aylwin led a broad centre-left coalition, the Concertación, which governed Chile for two uninterrupted decades, spanning four successive administrations.⁸

Despite the restoration of democratic institutions, the early years of democratic governance were shaped by significant constraints. Although elections were free and competitive, Chilean democracy was tutored by institutional mechanisms entrenched by the outgoing regime, including the presence of appointed Senators and the continued command of the Army by Pinochet until 1998. The binomial electoral system reinforced coalition politics and systematically overrepresented the opposition. The threat of military interference, though mostly implicit, remained a constraint on early policymaking.

The social and economic context was demanding. In 1990, nearly 39% of Chileans lived below the poverty line (Contreras et al., 2001). The country faced deep infrastructure deficits and widespread unmet social demands in education, health, and housing. The left pushed for a decisive departure from the inherited economic model, advocating a stronger redistributive role for the state. The right, in contrast, retained a strong institutional position and vigorously defended the liberal economic order, wary of any perceived return to the failed policies of the early 1970s.

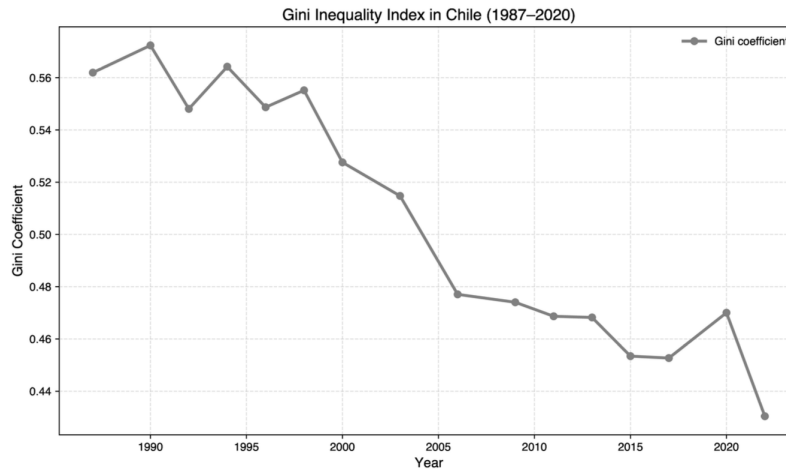
Faced with these cross-cutting pressures, the Concertación pursued a pragmatic strategy: it preserved the liberal macroeconomic framework while gradually reintroducing social protection,

⁸ The Concertación de Partidos por la Democracia (Concertación) coalition governed through four presidencies: Aylwin (1990–1994, Partido Demócrata Cristiano (PDC)), Frei Ruiz-Tagle (1994–2000, PDC), Ricardo Lagos (2000–2006, Partido por la Democracia (PPD)), and Michelle Bachelet (2006–2010, PS).

rebuilding state capacities, and expanding targeted public spending. Economic growth, rather than redistribution, was positioned as the primary vehicle for poverty reduction.

The formula proved remarkably successful during the 1990s. Underpinned by sound macroeconomic management and the credibility of an autonomous Central Bank, Chile averaged over 7% annual growth between 1990 and 1997. Poverty fell sharply, social indicators improved, and Chile became a leading example of successful democratic and market transition.

Figure 4.1: Gini Inequality Index in Chile, 1987–2020.



Source: World Bank Poverty and Inequality Platform (2026).

4.1.1 Protests and a policy turn towards equity

Rising inequality gradually became a defining political concern during the democratic period. As Figure 4.1 shows, income inequality in Chile remained high. Although there was some moderation during the 1990s and early 2000s, progress stalled in subsequent years, and the Gini coefficient remained above 0.44 as of 2020. This persistent inequality shaped public perceptions of the social contract, weakened the legitimacy of market-oriented reforms, and increased pressure for redistributive measures. The political response—more expansive social transfers, tuition-free higher education, and other social programmes—addressed equity concerns but was not always designed around productivity objectives. This shift in policy priorities coincided with the productivity slowdown, although the direction and magnitude of any causal link are difficult to establish.

Particularly from the early 2000s onward, Chilean politics increasingly emphasised distributional concerns. Fiscal resources were progressively directed towards social spending, most notably on pensions, education, and healthcare. This expansion, enabled by the copper price boom of 2002–2013 and framed by the institutional stability provided by Chile’s fiscal rule, increased permanent expenditure commitments and added to longer-term fiscal pressures (Flehtner & Middelani, 2024; Medina & Valdés, 2022).

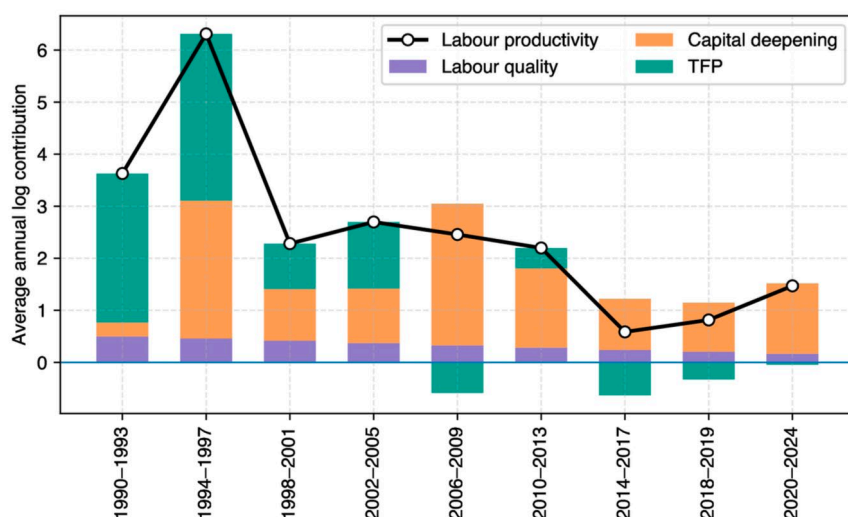
Two waves of mass student protests in 2006 and 2011 helped reorient political priorities. The mobilisations drew attention to inequities in the market-driven education system and prompted a policy response. A key outcome was a major expansion of public subsidies, including tuition-free university education for the bottom 60% of the income distribution, with significant fiscal costs. The protests also contributed to a more immediate focus in policymaking, as governments responded to pressing social demands alongside longer-term policy objectives.

The productivity slowdown that began in the mid-2000s was initially masked by highly favourable terms of trade and strong investment flows linked to the global commodity boom. Copper prices tripled between 2003 and 2011, and high investment rates sustained headline GDP growth. These resource windfalls may have reduced the perceived urgency of productivity-enhancing reforms. Reform efforts were delayed or diluted, while innovation, competition, and skills quality remained relatively low political priorities. By the time growth decelerated in the mid-2010s, the political economy of reform had become more constrained.

In late 2019, a seemingly minor increase in public transport fares in Santiago ignited a wave of nationwide protests that quickly evolved into a broader critique of Chile's socio-economic order, often labelled the "neoliberal model". The *Estallido Social* ("Social Outburst") of October that year marked a profound rupture in the country's political landscape, compelling the political establishment to acknowledge longstanding social demands.

The period from 1990 to 2025 saw undeniable progress: macroeconomic stability was preserved, poverty dramatically reduced, and the state's ability to deliver social and regulatory functions steadily improved. However, Chile's political economy also shifted toward redistribution of income, with less political consensus around the productivity agenda that had underpinned earlier success.

Figure 4.2: Decomposition of labour productivity growth, 1990–2024.



Contribution to labour productivity (real GDP per hour worked) growth 1990–2024 in 4-year periods (except for 2018–2019 and 2020–2024, which are rearranged to avoid spurious variations from the

4.2 Economic policies related to productivity since 1990

4.2.1 Investment and infrastructure

Investment promotion has remained a key focus since 1990. Following the 1990s, Chile developed its capital markets, modernised securities laws, and eliminated controls on foreign capital flows by 1998. Public–private partnerships (PPPs) were used to finance major transport and logistics infrastructure projects, especially for highways, ports, and airports.

Energy and natural resources policy pivoted toward diversification. Significant investments were made in hydroelectric and renewable energy projects. Mining royalties were successively increased, and the government began promoting lithium extraction and green hydrogen development from 2018 onward.

One notable feature of Chile's growth trajectory between 1990 and 2025 is the consistent and robust contribution of capital accumulation. Unlike total factor productivity, which slowed markedly after the early 2000s, investment levels remained relatively high by international standards. Although gross fixed capital formation decelerated somewhat after the 2013 external shocks, its performance remained resilient compared to TFP dynamics. As a result, capital accumulation has been a persistent—and increasingly important—driver of economic growth throughout the period.

4.2.2 Education

Human capital policies expanded educational access at all levels. A student loans programme (Crédito con Aval del Estado, CAE) enabled an unprecedented expansion of university enrolment, while a 2016 reform introduced tuition-free higher education for students from the bottom 60% of the income distribution. However, these quantity-driven efforts were not matched by quality improvements. Persistent mismatches between graduates' skills and labour-market needs, low tertiary completion rates, and weak links between higher education and innovation systems limited the impact of these policies on productivity (Beyer & Gallego, 2014; Micco & Repetto, 2014). As a result, the expansion of tertiary education contributed only modestly to economic growth, despite its role in improving access and equity.

In 2008, the government introduced the Subvención Escolar Preferencial (SEP), a targeted voucher programme aimed at improving outcomes among socially disadvantaged students by providing schools with additional per-student funding conditional on improvement plans and accountability mechanisms. It marked a shift from uniform school financing toward a needs-based model, aiming to reduce educational inequality while maintaining the market-based structure of school choice. SEP has been extensively studied as a case of quasi-market reforms with equity goals (Murnane et al., 2010; Neilson, 2021; Valenzuela & Montecinos, 2017).

Michelle Bachelet's second term (2014–2018) inaugurated a series of major reforms on

education at the primary and secondary levels, mainly aimed at equalising the conditions of students across socioeconomic strata in the public and private subsidised sectors. For-profit schools were forced to choose between becoming foundations or forgoing subsidies, and schools became much more closely supervised. The responsibility over public schools shifted from municipalities to dedicated agencies comprising larger geographical units.⁹

Still, Chilean students score below the OECD average in literacy and numeracy, though above other Latin American countries. Despite various initiatives to expose students to STEM subjects and develop digital competencies, their reach has been limited (OECD, 2025). Table 4.1 outlines the main education reforms of the last 10 years.

Table 4.1: Key reforms in education since 2014

Year	Law	Main Focus	Key Measures
2015	Law 20.845	School Inclusion	Ends profit, selection, and co-payment in publicly funded schools
2016	SEP Reinforcement	Equity	Increases resources to vulnerable students via targeted subsidies
2017	Law 21.040	Public Education System	Creates SLEPs to replace municipal school administration
2018	Law 21.091	Higher Ed. Access	Tuition-free tertiary education for vulnerable students
2023–	—	Ongoing Reform	Curriculum revision, teacher support, and further equity measures

4.2.3 Technological and structural change

Innovation policies gained greater prominence after 2000. Public funding for research and development (R&D) increased, albeit from a very low base by international standards. Programmes to support startups and technology-based entrepreneurship were launched, notably through agencies such as CORFO's Start-Up Chile initiative.

Industrial policy shifted toward horizontal support, emphasizing ecosystem development over direct firm subsidies. Strategic National Agendas targeted emerging sectors such as aquaculture, renewable energy, and services, seeking to foster diversification beyond traditional resource-based activities. However, these initiatives have rarely translated into concrete actions.

In terms of creative destruction, Chile maintained relatively low barriers to entry for new firms, and business startup costs were progressively reduced. Nevertheless, productivity dispersion among firms remained high, and dynamic reallocation mechanisms were weaker than in

⁹ Servicios Locales de Educación Pública (SLEP).

advanced economies (Micco & Repetto, 2014).

Overall, while the agenda for technological upgrading expanded, its impact on aggregate productivity remained limited. Efforts to foster innovation and diversification did not fully translate into stronger total factor productivity growth, reflecting deeper challenges related to human capital quality, technological absorption, and firm-level capabilities.

4.2.4 Markets

Labour-market reforms advanced towards increased worker protections and less flexibility. Working hours were gradually reduced, and union rights were expanded, notably through a major labour reform enacted in 2016. The private pension system was complemented by the introduction of a state-funded minimum pension guarantee. Segmentation of the labour market, informality, and low participation rates among women and older workers persisted as important challenges.

Capital markets were progressively modernised. Financial supervision was strengthened with the creation of the Comisión para el Mercado Financiero (CMF) in 2017, unifying banking and securities regulation. Antitrust enforcement was upgraded, with stronger merger controls and harsher penalties for collusion, particularly following high-profile scandals in the retail and paper industries.

Recent developments have introduced new challenges to labour and capital markets. A legislative reform passed in 2023 reduced the statutory maximum workweek from 45 to 40 hours, with implementation phased in over five years. While intended to address wellbeing concerns, the reform has raised concerns over potential adverse effects on labour productivity and the drive towards automation.

At the same time, a series of exceptional pension fund withdrawals between 2020 and 2022—motivated by the COVID-19 crisis—undermined the long-term stability of Chile’s capital markets. The withdrawals significantly reduced the assets under management of pension funds, disrupted corporate bond and equity markets, and prompted concerns over the sustainability of the mixed pension system. Although framed as one-off measures, their recurrence revealed deeper political pressures and exposed vulnerabilities in Chile’s macroprudential framework.

4.2.5 Internationalisation

Chile’s international integration strategy deepened significantly over the period. Building on the trade liberalisation of the 1970s and 1980s, the country expanded its network of free trade agreements, securing preferential access to major markets including the United States, the European Union, China, and South Korea. It also participated actively in multilateral initiatives such as the Trans-Pacific Partnership (TPP) and regional forums like Asia-Pacific Economic Cooperation (APEC).

FDI surged, particularly in mining, energy, infrastructure, and services, supporting capital

deepening and export diversification. Chile's reputation as a stable, investment-friendly democracy enhanced its attractiveness to global investors.

In 2014, as part of a broader tax reform, the Foreign Investment Statute (D.L. 600) was repealed and replaced with a new approach to FDI promotion. From then on, a dedicated promotion agency, *InvestChile*, was tasked with marketing Chile abroad and advocating for investor needs internally.¹⁰

The restoration of democracy also reversed Chile's international diplomatic isolation. Whereas the military regime had faced widespread censure, democratic Chile was rapidly reintegrated into the global community. International institutions and bilateral partners provided substantial support, contributing to an external environment highly favourable to Chile's growth and development.

Nonetheless, export diversification remained narrow, and external shocks, particularly fluctuations in copper prices continued to expose vulnerabilities linked to the country's resource-intensive growth model.

4.2.6 The development and consolidation of institutions

The consolidation of macroeconomic and fiscal frameworks was a major institutional achievement. Chile adopted a fiscal balance rule in 2001 and further strengthened fiscal institutions with the Fiscal Responsibility Law of 2006. Over time, the tax burden was moderately increased to finance expanded social spending.

Government capabilities were progressively enhanced through professionalisation reforms, transparency initiatives, and the introduction of Regulatory Impact Assessments (RIAs) from 2014 onward (CNEP, 2024). The creation of the "Alta Dirección Pública" system in 2003 professionalised senior public appointments, reducing political discretion and raising managerial quality across key public agencies. In parallel, the 2008 "Ley de Transparencia" institutionalised citizens' rights to public information and established the autonomous "Consejo para la Transparencia" to oversee compliance.

Chile's accession to the OECD in 2010 further supported this institutional agenda. OECD peer reviews and technical cooperation helped shape domestic reforms in areas such as FDI promotion, competition policy, and regulatory quality, bolstering Chile's capacity to align with international best practices (OECD, 2025). Initiatives such as the Budget Transparency Portal and ChileCompra also expanded access to information on public procurement and resource allocation, reinforcing accountability and trust in the public sector.

Overall, the 1990–2025 period reflects a pragmatic effort to combine market openness with

¹⁰ The reform eliminated D.L. 600's tax invariability and repatriation guarantees, replacing them with a more discretionary system.

institution-building and incremental social policy expansion. While these efforts solidified macroeconomic and social gains, they proved insufficient to sustain high rates of productivity growth.

5 What holds productivity back today

After half a century of deep transformations, Chile's productivity challenge has shifted from the correction of macroeconomic and allocative distortions to the accumulation and effective use of human capital, innovation, and institutional capabilities. Three interrelated bottlenecks stand out today: weak returns to the expansion of higher education coverage, chronically low innovation efforts and diffusion, and a business climate that remains regionally attractive but has lost dynamism relative to advanced peers.

The slowdown in total factor productivity growth that has become visible after the mid-2000s is consistent with the exhaustion of the first-generation reforms discussed in Sections 2, 3 and 4. The patterns in Figures 2.1, 3.1 and 4.2 motivate a forward-looking diagnosis that focuses on the quality of human capital, the intensity of innovation, and the effectiveness of market institutions.

5.1 Higher education: coverage without effective returns

Since the mid-2000s Chile expanded tertiary enrolment to levels comparable to the OECD. The policy timeline in Table 4.1 documents that shift. Outcomes remain uneven. Cohort tracking shows that many students drop out early, and that the chances of finishing vary a lot between different groups of students (Castro-Zamudio, 2023; Ministerio de Educación de Chile, 2011; Von Hippel & Hofflinger, 2021). Programme-level analyses indicate a large dispersion in private returns, with a large downside tail once tuition fees, foregone earnings and time to complete a degree are considered (González-Velosa et al., 2015). Governance frictions in the first-generation accreditation regime weakened the disciplining effect on low-value programmes (Barroilhet et al., 2022). At the same time, average wage premia for tertiary graduates remain high (OECD, 2024). The combination of high average outcomes with a large variation in results implies that new students resulting from the expansion in coverage are taking a real risk in seeing positive returns. The contribution of tertiary expansion to aggregate productivity has therefore been diluted.

The challenge is to shift from quantitative expansion to effective learning and skills. This includes raising completion, strengthening quality assurance, and improving the alignment between fields of study and Chile's evolving technological landscape.

A more promising margin lies in upper-secondary technical-professional education and short-cycle tertiary training, which can supply job-ready skills without requiring every student to pursue a full university degree: 39% of new tertiary entrants in Chile already choose short-cycle programmes, and available evidence suggests that well-completed higher technical careers can generate strong earnings gains. Yet this route will close skills gaps only if Chile

improves its design: OECD reviews show that fewer than 10% of upper-secondary Vocational Education and Training (VET) students are enrolled in dual school-work tracks, workplace learning remains weakly developed, and transitions between secondary and tertiary VET programmes and employer-recognised qualifications remain poorly articulated (OECD, 2024).

5.2 Innovation and R&D, the persistent deficit

Chile continues to invest little in research and development relative to the OECD average, with an especially limited role for business R&D (OECD, 2025; OECD & United Nations, 2018). Firm surveys indicate that the incidence of innovation is low by international standards (OECD, 2025). Other comparisons point to weaker performance in human capital and research, and in knowledge and technology outputs (World Intellectual Property Organization (WIPO), 2025). Micro evidence shows limited short-run productivity effects of innovative effort at the firm level (Álvarez et al., 2010; Benavente, 2006; Crespi & Zúñiga, 2012). These patterns are coherent with the picture in Table 6.1 and with the long run indicator profiles in Table 1.1.

Policies should therefore move from fragmented, generic instruments toward coherent and bolder programmes that co-finance private R&D, support technology adoption in small and medium-sized enterprises, and build stronger research to industry linkages (OECD, 2025).

5.3 Business climate, still solid but losing edge

Chile remains an attractive location for investment in Latin America. Product market settings are near the OECD average with specific frictions in permits, licensing, and network sectors (OECD, 2023). Prior to the pandemic, competitiveness profiles placed Chile at the top of Latin America, though with persistent gaps in skills and innovation (World Economic Forum, 2019). The discontinued “ease of doing business” index showed a mid-range position within the OECD on processes such as permits and property (World Bank, 2020). Institutional quality remains comparatively strong but has fallen below mid-2010s peaks (World Bank, 2024). Statutory openness to foreign direct investment, however, remains favourable (OECD, 2020). These facts are consistent with the institutional and market configurations reported in Table 6.5 and Table 6.2, and with Chile’s internationalisation settings in Table 6.4. Overall, the business-climate gains of the earlier liberalisation wave have proved difficult to sustain. Having been introduced under an authoritarian regime, the reforms have faced persistent questions of legitimacy, even though inequality and other social indicators improved under democracy (see Figure 4.1).

The next set of microeconomic reforms should simplify procedures, strengthen competition in infrastructure and network sectors, and rebuild predictability and coordination capacity across agencies. The objective should be to recover the ease of entry and reallocation benefits that supported earlier productivity gains while preserving social legitimacy.

5.4 Policy synthesis

The three bottlenecks share a common thread. The extensive margin of reforms has been largely harvested. Future productivity growth will require depth. Chile should focus on skills that translate into completion and employability, innovation efforts that raises diffusion and business R&D, and regulatory management that restores the ease of doing business in practice while maintaining credibility and openness. The framework in Section 6 provides a useful map to organise these priorities across the main policy areas of factor accumulation, structural change, markets, internationalisation, and institutions.

6 Applying the pro-productivity policy framework to Chile

This section applies the pro-productivity policy typology developed by van Ark et al. (2023) to the evolution of Chile's policies since 1958 as a case study.

The framework classifies policies into four categories: factor accumulation, technological and structural change, markets and resource allocation, and internationalisation; underpinned by foundational elements such as institutional quality, state capabilities, and macroeconomic frameworks. These categories provide a structured lens through which to assess Chile's shifting productivity agenda across three major periods: the inward-oriented development model before 1973, the liberalisation and adjustment phase between 1973 and 1990, and the period of democratic consolidation and pragmatic reform from 1990 onward.

6.1 Does the framework fit the case of Chile?

Ideally, a typology of pro-productivity policies should provide an analytical framework suited to assessing a country's policy mix in a way that yields clear and constructive insights. It should help elucidate, for instance, the extent to which policies have evolved in line with the economy's development stage, and identify where they have fallen short as challenges have shifted over time

Chile's high-growth era, which began as a rebound from the early 1980s crisis, demonstrates the country's success in correcting major distortions and strengthening macroeconomic fundamentals.

However, a dispassionate examination of Chile's performance since the mid-2000s reveals that the country has struggled to transition toward high-skill, innovation-driven growth. This reflects a growing mismatch between the rising complexity of required interventions and the limited institutional and strategic capacity of the Chilean state.

Analysing Chile's experience through the framework of van Ark et al. (2023) illustrates that pro-productivity policies, even when sound in principle and informed by successful experiences in advanced countries, may fail during implementation and evaluation. For example, the expansion of higher education from the mid-2000s was expected to create a highly skilled workforce capable of supporting Chile's transition towards a more sophisticated knowledge economy. The results fell short of that expectation.

The framework's emphasis on the technical drivers of productivity provides a useful

classification of the relevant policies, especially when complemented by an analysis of political economy. Some of Chile's most consequential market reforms were introduced during Pinochet's authoritarian regime. Their association with the dictatorship weakened the political legitimacy of the market-oriented model and contributed to later public opposition, including during the 2019 social unrest. For growth-promoting policies to be durable and widely supported, they must also meet standards of legitimacy and procedural fairness.

In addition, the framework's core focus on market functioning and innovation systems is highly relevant for Chile. With a globally competitive, capital-intensive export sector coexisting alongside a fragmented informal services sector, Chile's productivity agenda must prioritise not only frontier innovation, but also the diffusion of basic capabilities across a segmented production structure. Policies that are successful in countries with dense industrial ecosystems and high firm-level capabilities may require significant adaptation to achieve similar outcomes in Chile.

Chile's historical trajectory reinforces the framework's insight that productivity policies must evolve: from dismantling distortions and stabilising the macroeconomy, toward enabling complex, innovation-led growth. With appropriate tailoring, the framework remains an excellent guide for evaluating Chile's past efforts and for designing a future-ready productivity agenda.

6.2 Main patterns across periods

Chile's experience reveals a historical pattern where early productivity gains stemmed from dismantling obvious distortions, but later gains required deeper capabilities that proved harder to build.

The pre-1973 inward-oriented model initially fostered capital accumulation but progressively generated allocative inefficiencies that eroded productivity. The dismantling of regulations and barriers to trade (1973–1990) corrected many distortions at high social cost, ultimately generating large efficiency gains. The democratic period (1990–2025) consolidated the liberal framework, strengthened institutions, expanded education, and improved infrastructure. Yet, productivity growth decelerated, particularly after the early 2000s, suggesting diminishing returns from liberalisation alone and the rising importance of dynamic efficiency factors.

6.3 Summary by policy dimension

Capital Accumulation. Investment remained robust across periods, particularly after 1990. Financial market development, public-private partnerships, and improved macroeconomic management underpinned strong gross fixed capital formation. Unlike productivity, capital accumulation proved resilient even through external shocks.

Technological and structural change. Efforts to foster innovation and sectoral upgrading expanded after 2000, with greater public R&D funding and strategic sectoral initiatives. Nevertheless, outcomes remained modest. Productivity dispersion among firms persisted, and Chile struggled to develop significant new competitive advantages beyond its traditional

resource-based sectors.

Markets. Labour and capital markets were progressively liberalised and modernised. Institutional reforms strengthened supervision and competition policy. However, labour-market segmentation, rigidities, and financing gaps for smaller firms remained persistent barriers to productivity-enhancing reallocations. Recent reforms, such as the phased reduction of the maximum statutory workweek from 45 to 40 hours, may further limit productivity gains in sectors with constrained margins or limited flexibility. Meanwhile, exceptional pension fund withdrawals between 2020 and 2022—although introduced in response to strong political pressures—undermined long-term savings, disrupted domestic capital markets, and exposed weaknesses in Chile’s macro-prudential policy framework.

Internationalisation. Chile has achieved an impressive degree of global integration, signing numerous free trade agreements and becoming a major destination for foreign direct investment. Export diversification advanced relative to earlier decades, supported by the emergence of new sectors such as forestry, aquaculture, and fruit. However, the export basket remains relatively concentrated by international standards, with continued reliance on copper and other natural resources. This has limited Chile’s exposure to global value chains and has left the economy vulnerable to external shocks, particularly commodity price volatility. Migration restrictions were progressively relaxed.

Institutions and Frameworks. Institutional quality improved markedly over the democratic period. Key advances included Central Bank autonomy, fiscal rules, meritocratic reforms in public administration, and stronger regulatory oversight across financial, competition, and environmental domains. However, as the state’s footprint expanded, so did the complexity of regulatory processes. Overlapping mandates, fragmented governance structures, and limited coordination between agencies increasingly hampered the design and implementation of productivity-enhancing policies. These frictions became particularly salient in sectors requiring inter-ministerial alignment—such as energy, mining, and environmental licensing—where delays and uncertainty discouraged investment and innovation.

Adding a slight innovation to the borrowed analytical framework, each policy is rated on its effectiveness: check-marks (✓) to indicate positive impact and cross-marks (X) to denote negative outcomes, with the number of symbols reflecting intensity. These summaries are based on the preceding historical analysis and are intended to make Chile’s long-run experience comparable with other country cases applying the same framework.

	Likely counterproductive policy — distortionary or harmful to productivity.
	Effective policy, but typical of a less developed country (e.g. basic investment promotion, macro stabilisation).
	Effective policy, typical of a middle-income country (e.g. capital

	market development, tertiary expansion).
	Effective policy, typical of an advanced economy (e.g. coordination capacity, innovation systems, regulatory quality).

Colour code used in Tables 6.1–6.5, following van Ark et al. (2023).

Tables 6.1–6.5 synthesise Chile’s pro-productivity policy trajectory across four core policy domains and the institutional and macroeconomic foundations that underpin them, following the typology proposed in van Ark et al. (2023). It should be stressed that each of the three periods spans well over a decade and conceals considerable internal variation in policy orientation and intensity; the tables necessarily compress this heterogeneity into broadly comparable categories for the sake of cross-period and cross-country comparison.

Table 6.1: Policies for the Accumulation of Production Factors, by Period (1958–2025)

	1958–1973	1973–1990	1990–2025
Investment	Public investment in SOEs, especially through CORFO. ✓✓	Liberalisation opened all sectors to private initiative. ✓✓	Macroeconomic credibility and PPP frameworks supported sustained private investment. ✓✓✓
	Overvalued exchange rate reduced competitiveness of tradables, discouraging investment in agriculture and manufacturing. X X	Elimination of public investment planning capacity. X Volatility and 1982 crisis discouraged investment in tradables during much of the period. X X	Capital markets strengthened via legal modernisation (securities, governance). ✓✓
			Elimination of capital controls in 1998. ✓
			Permitting complexity and unpredictability discouraged investment in some sectors. X X X
Human capital	Primary and secondary education coverage expanded, especially in urban areas. ✓	Vouchers expanded access to private schools. ✓✓	Massification of higher education through loans and free tuition for lowest-income students. ✓

	1958–1973	1973–1990	1990–2025
	CORFO provided vocational training. ✓	Public universities were intervened and underfunded. Quality declined. X X	Persistent mismatch between supply and labour-market needs. X X Quality problems and limited productivity impact from tertiary expansion. X X
Energy, environment & resources	State-led investment in coal and power generation. ✓ Tensions over national control leading to nationalisation. X X	Mining and energy sectors reopened to private (incl. foreign) investment. ✓✓ Incipient environmental regulation remained weak despite large-scale hydro development. X	Acceleration of investment in renewable energy and electricity market reform. ✓✓ Lithium and hydrogen industrial strategies launched. ✓ Expansion and professionalisation of environmental evaluation system. ✓ Complexity of permitting and management of investment externalities damage investment in mining and energy. X X X Institutional fragmentation and unclear governance hindered lithium and green hydrogen policies rollouts. X X

Table 6.2: Policies aimed at Markets, by Period (1958–2025)

	1958–1973	1973–1990	1990–2025
Financial markets	Financial repression: interest rate ceilings and credit rationing limited financial depth and efficiency X X X	Private pension funds (1981–1982) developed equity and corporate bond markets. ✓✓✓	Capital market modernisation via legal upgrades (securities, corporate governance). ✓✓✓
		Lax regulation contributed to the 1982 crisis; post-crisis supervision prioritised stability over competition X X	Elimination of capital controls (1998) supported integration and diversification. ✓✓
			Pension funds withdrawal as COVID relief damaged corporate bonds and equity markets X X
Product markets	Expanding price controls distorted signals. Widespread shortages and black markets, especially post-1970. X X X	Price liberalisation and dismantling of trade barriers. ✓	Consumer Protection Law and agency (SERNAC) enhancement ✓
Labour markets	Focus on job stability via tight regulations and public employment. X X	Flexibilisation, reduced worker protections. ✓	Labour-market reform, stronger union rights (2016). ✓
	Real wages fell behind inflation (1971–1973). X X	Pension reform introduced reduced labour-market wedge ✓✓	The phased reduction in the statutory workweek may affect productivity unless accompanied by organisational adjustments. ✓
	High contribution rates under fragmented defined-benefit pension system X X		Mixed pension system with minimum guaranteed

	1958–1973	1973–1990	1990–2025
			benefit, lends political sustainability to the system ✓✓
Competition		Wide-ranging free private initiative ✓✓ Most barriers to entry removed. Antitrust law upgraded ✓✓	Antitrust law further enhanced: tougher cartel prosecution, Mergers and Acquisitions (M&A) oversight ✓✓

Table 6.3: Policies for Technological and structural change, by Period (1958–2025).

	1958–1973	1973–1990	1990–2025
Innovation and technology	State-led modernisation focused on agriculture and copper. Minimal technological spillovers beyond targeted sectors ✓✓	Limited public R&D to adapt foreign techniques in aquaculture and forestry ✓✓. Broader innovation system remained underdeveloped X X	Limited increase in public investment in R&D ✓. Public support for startup ecosystem (e.g. Start-Up Chile) ✓✓. Strategic National Agendas in sectors like mining and biotech ✓✓
Industrial policy	Comprehensive ISI: import substitution via subsidies, tariffs, and state ownership. Limited productivity diffusion X X	Targeted PPPs in aquaculture and forestry fostered long-term export success ✓✓✓.	Public-private coordination in specific sectors (e.g. berries, wine, salmon) ✓✓.

	1958–1973	1973–1990	1990–2025
		No overarching industrial strategy; limited coordination X	Absence of national industrial strategy; fragmented and often reactive policy efforts X X
Creative destruction	Import protection and strong job stability incentives reduced firm turnover and competition X X X	Exposure to foreign competition drove reallocation in inefficient sectors ✓✓.	Lower business entry barriers and flexible markets maintained competition ✓✓.
			High informality and barriers to scale persist in many service sectors X X

Table 6.4: Policies for internationalisation, by Period (1958–2025)

	1958–1973	1973–1990	1990–2025
Trade	ISI-driven import restrictions for consumer and capital goods. X X High, heterogeneous tariffs intended to protect nascent industries. X X X	Rapid unilateral trade liberalisation: uniform 10% tariff by 1979 ✓✓ Free market access for exporters to foreign exchange ✓	Expansion of bilateral and regional FTAs, including with US, EU, China ✓✓✓ Establishment of ProChile and global trade promotion network ✓✓ Accession to APEC; active regional leadership ✓
	Complex system of multiple exchange rates and foreign currency rationing. X X		
FDI	Growing distrust and eventual expropriation of foreign-owned companies. X X X	D.L. 600 encouraged FDI via tax invariability, profit repatriation, hard currency convertibility ✓✓	Phase-out of D.L. 600 created uncertainty over future taxation X
			Investment attraction

	1958–1973	1973–1990	1990–2025
		No clear definition of strategic sectors; nearly all open to foreign control ✓	policies, institution alised via InvestChile ✓✓ Extensive network of bilateral investment treaties ✓✓
Migration	Selective openness to European professionals and political exiles. ✓	strict screening for national security and limited entry, except for select professionals or investors. ✓	Gradual liberalization, non-enforcement on recent waves. ✓

Table 6.5: Policies for Institutions and Frameworks, by Period (1958–2025)

	1958–1973	1973–1990	1990–2025
Institution building	Establishment of Oficina de Planificación (ODEPLAN). ✓✓	New institutional architecture from 1980 Constitution, state role limited, strong property rights. ✓✓ Foundational legal framework for pension and education systems. ✓✓	Central Bank independence (1989). ✓✓✓ Environmental governance institutions: ministry, superintendency, tribunals, impact assessment. ✓✓ Consolidation of financial institutions supervision in CMF. ✓✓ Creation of CNEP. ✓✓ OECD accession (2010) and ongoing peer review. ✓✓✓
Macro policy and taxation	Chronic macroeconomic instability; inflation mismanagement X X X Tax structure biased toward indirect and volatile sources	VAT introduced (1975) ✓✓ Lower government spending, redundant areas shut down ✓✓	Fiscal Responsibility Law and structural balance rule ✓✓✓ Progressive tax reforms

	1958–1973	1973–1990	1990–2025
	XX	Excessive deregulation and unsustainable private debt buildup XXX	with increasing revenue share ✓✓
Government capabilities		Drastic paycuts damaged public service capabilities XX	Creation of Alta Dirección Pública ✓✓ Transparency Law ✓✓ Budget Transparency Portal and Chile-Compra ✓✓ Regulatory Assessments ✓✓ Impact (incipient).

6.4 Looking to the future: strengths and limitations of Chile's approach

Chile's pro-productivity strategy delivered strong gains in macroeconomic stability, investment, and international competitiveness. It demonstrated the power of correcting distortions and building credible institutions to support sustained growth.

However, the limits of these first-generation reforms became visible as Chile transitioned toward higher income levels. Productivity growth faltered despite continued liberalisation, underlining that dynamic capabilities—innovation, technological adoption, high-quality human capital—don't necessarily emerge from pro-market reforms alone. Institutional complexity, weak policy coordination, and the limited productivity returns from expanded but uneven-quality tertiary education further constrained Chile's ability to shift toward an innovation-driven model.

Thus, Chile excelled in correcting inefficiencies but faced greater difficulties in fostering the more sophisticated, state-enabled conditions required for sustained long-term growth. A concentrated export structure and fragmented regulatory landscape increasingly undermined Chile's competitiveness in high-productivity sectors, highlighting the need to go beyond liberalisation toward a more strategically coordinated productivity agenda.

Applying the framework of van Ark et al. (2023), Chile's experience suggests that its pro-productivity policies were broadly fit for purpose during the liberalisation and stabilisation phases, but increasingly inadequate as the economy matured.

The reforms of the 1970s through the 1990s effectively dismantled distortions, restored macroeconomic discipline, promoted investment, and secured global integration, delivering a remarkable growth phase. From the mid-2000s onward, however, productivity gains stalled despite continued reform activity, revealing the limits of liberalisation in sustaining long-run performance once state capacities fail to keep pace with new challenges. Three such

challenges deserve particular attention going forward.

Population ageing. Chile is ageing faster than most of today's advanced economies did at a comparable income level: the share of the population aged 60 and over rose from 9.5% in 1992 to around 18% by the early 2020s and is projected to reach roughly 32% by 2050, as the fertility rate has fallen to about 1.6 children per woman and life expectancy has risen past 80 years (Instituto Nacional de Estadísticas, 2022). This directly narrows the channel that Figure 1.2 shows has driven a growing share of growth since 1990, labour input, at the same time that the fiscal pressures of an older population, which are already visible in the large-scale pension fund withdrawals of 2020–2022 discussed in Section 4, will compete with other productivity-enhancing spending. Going forward, Chile has even less room than in the past to grow by adding workers, and correspondingly more riding on the productivity reforms discussed throughout this paper.

A more fragmented global economy. Chile's growth model has relied on deep integration into global markets, and the country remains the world's largest copper producer and a major supplier of lithium for the global energy transition. But this integration has also grown more concentrated and more exposed to geopolitical rivalry: over 80% of copper exports went to Asia by 2023, more than half to China alone, up from a far more diversified pattern two decades earlier, while high-technology goods account for only around 7% of Chile's manufactured exports, against roughly 20–28% in the United States and China (Poque González et al., 2026). Rising competition between rival trading blocs over critical mineral supply chains is a genuine opportunity for a resource-rich country like Chile, but it also threatens to fragment the open, rules-based trading system that underpinned the country's internationalisation strategy since the 1970s, and could leave Chile confined to a low-value-added, commodity-supplying role unless it accelerates diversification and moves up the value chain.

Artificial intelligence. AI diffusion could help address the innovation deficit and firm-level productivity dispersion documented in Section 5.2, since the technology's potential to spread existing best practice cheaply is especially relevant to a dualistic economy such as Chile's, where a highly productive, capital-intensive export sector coexists with a much less productive and fragmented services sector. The region is engaging with AI tools intensively — accounting for around 14% of global AI-tool usage against 11% of global internet users — yet receives little over 1% of global AI investment against roughly 6.6% of world GDP, and talent gaps are reportedly widening rather than closing (Economic Commission for Latin America and the Caribbean, 2025). Chile is ranked, together with Brazil and Uruguay, among the region's more advanced countries in AI readiness, which is an advantage, but realising it will still depend on the same conditions for stronger diffusion identified in Section 5: a workforce with the relevant skills — for which the technical and vocational reforms discussed above are directly relevant — and firms and institutions able to put new technologies to productive use, rather than adoption concentrating further in the frontier export sector while the rest of the economy is left behind.

Tentative policy directions. None of this changes the diagnosis reached in Section 5, but it does raise the urgency of acting on it. Three broad directions stand out, even if the precise instruments remain for future work to specify. First, human capital policy should continue

shifting from expanding coverage to raising completion, quality, and the alignment between fields of study, including technical and vocational pathways, and a labour market being reshaped by automation and AI. Second, innovation policy should move from generic, supply-side instruments towards mission-oriented programmes that actively support technology diffusion and adoption beyond the frontier export sector, rather than only rewarding R&D at firms that already innovate. Third, regulatory and institutional reform should prioritise simplification, predictability and better coordination across agencies, both to preserve Chile's attractiveness for the investment that the energy transition will require and to avoid missing the opportunities that new technologies present. Chile's experience over the past six decades shows that dismantling distortions can deliver strong, if temporary, productivity gains; the challenge for the next decades is to build the more complex institutional and technological capabilities that first-generation reforms alone cannot provide.

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Annex: Productivity measurement and data sources

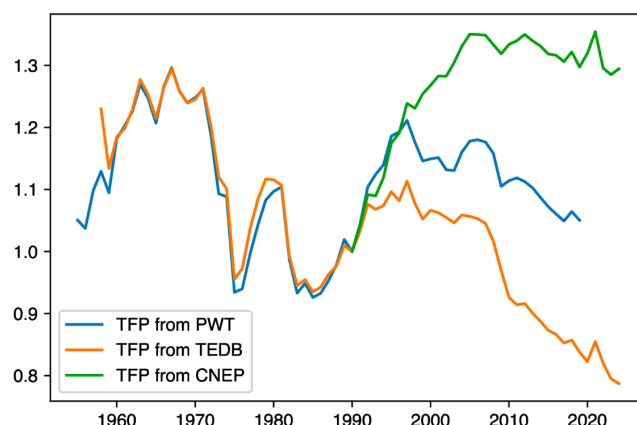
Assessing long-run productivity trends, especially for international comparisons, presents a data challenge. TFP measures are highly sensitive to the data source and to assumptions about GDP, labour and physical capital, factor shares, and the treatment of intangible and human capital. Both the Penn World Table (PWT) and the Total Economy Database (TEDB) cover most of the period under analysis, but their key inputs and productivity measures differ sharply from domestic sources and, in recent years, produce results that are difficult to reconcile with Chile's economic development.

The paper therefore relies mainly on two sources for TFP trends. PWT provides data from 1958 to 2022. For the period from 1990 onward, the analysis uses CNEP's national growth-accounting series, which extends to 2024.

The following comparison explains the choice to combine these two sources.

- **CNEP (Comisión Nacional de Evaluación y Productividad):** This is the standard source of data for Chile. It follows country-specific assumptions for factor shares, labour quality adjustments, and capital services. However, the CNEP series begins only in **1990**, limiting its usefulness for long-run analysis.
- **PWT (The Penn World Table):** This source it is commonly used for international comparisons and contains data for Chile starting in 1955. While its broader coverage is valuable for comparative purposes, its standardised assumptions may not reflect local economic structures. In Chile's case, it produces problematic trends, notably an implausible and persistent TFP decline beginning in the mid-2000s.
- **TEDB (The Conference Board Total Economy Database):** Like PWT, it is an internationally harmonised dataset that offers TFP series dating back to **1960** for most countries, including Chile. Unfortunately, it suffers even more acutely from the same problems as PWT when it comes to Chile's productivity measures.

Figure A.1: Total Factor Productivity, alternative sources (1955–2024)



Comparison of TFP estimates for Chile: PWT vs. TEDB vs. CNEP (1955–2024). All series indexed to 1.0 in 1990.

As shown in Figure A.1, even though the TEDB and PWT TFP series align over most of the sample period, they differ substantially in the early 1960s, and later diverge sharply from the early 1990s onwards. In turn, the CNEP and PWT productivity measures follow a similar path but then diverge starting in 1998.

Capital, labour and GDP series from the three alternative sources are shown in Figure A.2.

While panels A.2a and A.2d show that the GDP and hours worked series are very similar across sources, panels A.2b and A.2c illustrate the source of the divergence in TFP measures: PWT and TEDB contain capital measures that are much higher than the official figures published by the Central Bank of Chile. Additionally, the TEDB contains a measure of labour quality that diverges from both PWT and CNEP figures.

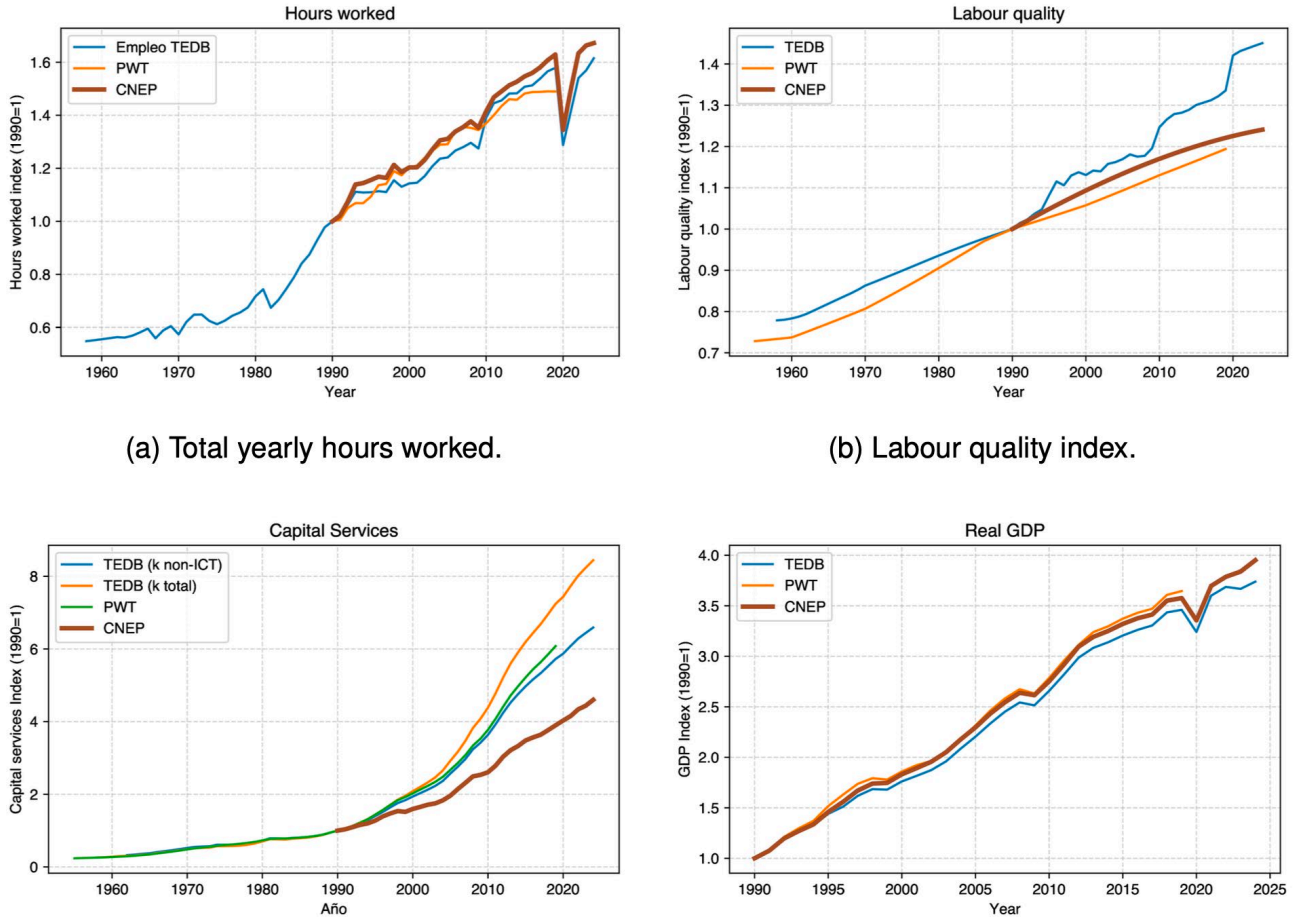
Of course, it is not impossible that the capital and labour quality measures from PWT or TEDB are more accurate than those produced by the Central Bank of Chile and CNEP. After all, aggregate capital is always very hard to measure correctly. However, choosing either of the former yields problematic results: that either the Chilean economy was as productive in 2024 as it was in 1960 (in the case of PWT); or its productivity is 20% lower than in 1960 (TEDB). These features would be extremely hard to reconcile with Chile's overwhelming socioeconomic transformation in the last 60 years.

At least two facts derived from Figure A.2 suggest data from either PWT or TEDB might not be as problematic before 1990:

- PWT and CNEP capital and TFP series broadly coincide from 1990 to 1997, so a hypothetical methodological anomaly in the PWT capital measure for Chile could be a relatively recent problem.
- PWT and TEDB also only differ after 1990 and closely resemble each other up until that point.

Until further research provides a stronger basis for choosing among the alternatives, using PWT data through 1989 supplemented by CNEP's more recent calculations appears to be the safest option. Conclusions based on the paper's growth-accounting exercises should nevertheless be interpreted with caution given the uncertainties involved.

Figure A.2: Labour, Capital and GDP measures in PWT, TEDB and CNEP data sets.



Labour, Capital and GDP measures in TEDB, PWT and CNEP data sets. Sources: TEDB, PWT and CNEP.