

CONFLICTING CLAIMS AND TAXATION: A DISTRIBUTIVE HISTORY OF 20TH CENTURY PERU

CESAR CASTILLO-GARCIA

WORKING PAPER N°2026/07

MARCH 2026

WORLD
INEQUALITY
..... LAB

The logo for the World Inequality Lab features a stylized graphic of a staircase or a series of dots forming an upward-sloping line on the right side of the text. The dots are arranged in a grid-like pattern that tapers to the right, creating a sense of height and progression.

Conflicting Claims and Taxation: A Distributive History of 20th Century Peru

César Castillo-García

Wesleyan University

Abstract

This paper examines the distributive history of the Peruvian economy throughout the 20th century, employing both quantitative and qualitative methods. It highlights how profitability and accumulation are shaped by structural processes and political institutions. The study reconstructs long-term factor income shares and introduces macroeconomic aggregates using the Distributional National Accounts (DINA) methodology for Peru since 1942. The findings reveal that Peru has established one of the most regressive tax systems globally, characterized by low top marginal rates on inheritance and income. Additionally, the paper demonstrates that periods of profitability recovery are closely aligned with neoliberal policy actions and the influence of business associations, identifying these as phases of neoliberalization. The study also shows that, since the 1990s, both the wage-productivity gap and the exploitation rate in Peru have significantly widened.

1 Introduction

Empirical and historical research has emphasized that high individual inequality has coincided with increases in profit share (Atkinson 2009; Jacobson and Occhino 2012; Piketty and Zucman 2014; Bengtsson and Waldenström 2018). The concentration of capital income—an index of the concentration of power within capitalism—and its counterpart, the reduction of wage share, have been primarily determined by politics, systems of belief, and fiscal institutions (Piketty 2019, 2022). Further empirical research has introduced nuances into this direct link between individual inequality and the rise in profit shares (Francese and Mulas-Granados 2015, Milanovic 2017, Ranaldi 2022). Nevertheless, the evolution of factor shares remains an important determinant on inequality and economic growth dynamics. Traditional economics has only timidly explored the latter nexus between distribution and growth (Ostry, Berg, and Tsangarides 2014; Jones 2015; Ostry, Loungani, and Berg 2019). However, this literature has overlooked the significance of understanding the “non-economic” determinants of inequality and the importance of capital shares within the growth-distribution nexus.

Authors in classical political economy (Goodwin 1967, Bhaduri and Harris 1986, Shaikh 2009) and Post-Keynesian economics (Kaldor 1955, Pasinetti 1962, Bhaduri and Marglin 1990, Taylor and Ömer 2020) have previously explored the relationship between factor shares and capital accumulation outside traditional economics. Even before Acemoglu and Johnson (2023), they emphasized the role of institutions and power dynamics—such as exploitation, the degree of monopoly, and conflicting claims—in determining income distribution among social classes and influencing capital accumulation. While classical political economists tend to explain the relationship between distribution and growth in terms of surplus extraction and its impact on accumulation, Post-Keynesian economists focus more on the effects of distributional changes on aggregate demand and, subsequently, on investment.

A particular branch of Post-Keynesian economics introduced the concept of growth regimes to analyze the historical evolution of factor income shares and assess the performance of political economies (Stockhammer and Ederer 2007; Lavoie and Stockhammer 2013; Palley 2014). Influenced by both classical and Post-Keynesian traditions, comparative and historical political economists examine structural and institutional conditions as well as growth models to classify varieties of capitalism (Baccaro and Pontusson 2016; Behringer and van Treeck 2022), study distributive cycles and institutional regimes (Gordon 1991; Boyer and Saillard 2002; Glyn 2011), and explore global capitalism and political cycles in the contemporary world (Milanovic 2019; Piketty 2022).

Nevertheless, both classical political economy and Post-Keynesian economics have devoted relatively little attention to reconstructing the historical data necessary for conducting statistical tests at both the aggregate and micro levels. Tools like Social Accounting Matrices (SAM), introduced by Taylor (1979), or the national accounting framework in value terms developed by Shaikh and Tonak (1994), have achieved only limited success in addressing this empirical gap. More recent efforts to measure the Marxian rate of profit, such as those by Maito (2014, 2018) and Basu, Huato, Lara Jauregui, and Wasner (2022), have introduced long-term and global-scale dimensions into the empirical analysis of classical political economy. However, these studies still lack a more comprehensive set of time series data necessary for deeper investigation into the aggregate relationships between factor shares and other national accounts.

The World Inequality Lab (WIL) has developed guidelines for constructing time series of detailed national accounts, known as Distributional National Accounts (DINA). DINA provides a framework for aligning macroeconomic aggregates with individual-level income and wealth accounts (Blanchet, Chancel, Flores, Morgan et al. 2024). However, limited access to official sources, the dependence on tax data, and the heterogeneity of statistical systems across different contexts constrain the coverage of samples included at WIL's database. These elements limit the coverage of Latin American countries in the database.

Studies by de Rosa, Flores, and Morgan (2022), as well as Alvaredo, de Rosa, Flores, and Morgan (2022), have developed DINA series for several Latin American countries, focusing on the distribution of growth during the commodities boom of the 2000s. Earlier efforts produced time series on top income shares, balance sheets, and wealth micro-data in country-specific studies (Alvaredo 2010; Morgan 2018; de Rosa 2022; Flores, Sanhueza, Atria, and Mayer 2020; Bauluz et al. 2025). In addition, using alternative methodologies, other research has reconstructed long-term income series for the region (Castillo 2015; Rodríguez Weber 2017; Alarco and Castillo 2018; Alarco, Castillo, and Leiva 2019). Most recently, Dietrich, Nievas, Odersky, Piketty, and Somanchi (2025) have prepared factor income shares and institutional national accounts for Latin American economies, including Peru, beginning in 1980.

Amid methodological and empirical debates, this paper aims to use the case of Peru to bridge the gap between the heterodox tradition of political economy and the empirical approach advanced by Piketty's associates at the WIL. Building on previous data gathered by Castillo (2015) and the DINA methodology, this work reconstructs factor shares and other macroeconomic aggregates for Peru, a peripheral capitalist economy. Additionally, I propose a set of macroeconomic indicators to track the evolution of profitability—an indicator of economic power and a key determinant of inequality—over the long term. The analysis draws from rich, albeit discontinuous, evidence found in official statistical reports produced by the Peruvian government. My goal is to examine the structural conditions and shifts in economic policy that have shaped long-term capitalist profitability and accumulation in Peru.

I reconstruct macroeconomic aggregate series for wages (or compensation of workers), gross profits, consumption of fixed capital, taxes on production, and mixed income as part of GDP and net national income (*NNI*) from 1942 to 2022. Additionally, the paper provides estimates for both pre-tax and post-tax national income. The historical evidence presented in this chapter elucidates the distributive reversal between wages and profits as a consequence of three factors: (1) wage-productivity decoupling, exemplified by increases in the ratio of exploitation; (2) the external dependence of the Peruvian economy, indicated by a strong correlation between the Peruvian gross rate of profit and the terms of trade; and (3) the power relations between labor and capital, which became increasingly favorable to the latter during the periods of neoliberalization that Peru has experienced since the 1940s.

In the second section, I discuss the challenges of reconstructing factor income shares in Peru. This section also summarizes the methods employed for reconstructing the time series and the DINA for that economy. In the third section, I examine the historical evolution of wage, profit, and mixed-income shares, framing this analysis within a historical narrative of both economic and political cycles. The fourth section provides an overview of the history of income and wealth taxation in

Peru, elucidating the conflicts among the government, the capitalist class, and workers regarding tax regressivity and the demands for stronger welfare institutions. Finally, the fifth section proposes aggregate distributive indicators, including the average productivity of the workforce, the rate of salaried employment, the average cost of labor, the aggregate index of value extraction, the rate of exploitation, and the rate of profit. Econometric results highlight the significance of both structural determinants (terms of trade, organic composition of capital) and political determinants (rate of exploitation) of profitability in Peruvian capitalism.

2 National Accounting and Factor Income Shares in Peru

2.1 Discontinuity and the Political Economy of Peruvian National Accounts

One of the main challenges in studying factor shares in Peru has been the discontinuity in the production of official statistics and national accounts. This issue partly stems from the nature of the process of adoption of the first national accounts and from the political economy of national accounting in Peru. During late 1930s, the Peruvian government focused on producing figures of national income and the balance of payments that were utilized to represent the situation of the national business environment to bring them into the Inter-American and global discussions on economic policy, as well as to attract international capital to the leading agricultural and mining industries during the Interwar and World War II (Castillo-García 2025).

In this context, the first estimate of Peruvian national income was produced by Pedro E. Paulet—then Chair of the Department of Commerce at the Ministry of Foreign Affairs, a trained engineer and aeronautics researcher, and former Peruvian consul in Yokohama—and published in the department’s journal *Informaciones Comerciales, Económicas y Financieras del Perú* (Commercial, Economic, and Financial Information of Peru) (Paulet 1938). Although an important statistical milestone, this first official estimate underestimated national GDP, as it included only the gross value added of agriculture, mining, and finance. Building on Paulet’s methodology and additional recommendations from contemporary scholars, Emilio G. Barreto—former Assistant Chief of the Department of Commerce and newly appointed technical adviser to the Banco Central de Reserva del Perú (BCRP)—constructed a revised estimate of Peruvian national income for the year 1942, completed in 1944, which incorporated the previously omitted industries (Barreto 1945). This figure subsequently became the initial observation of the national income series later produced by the BCRP.

After Peru joined the IMF, the Peruvian government enacted a law designating the Banco Central de Reserva del Perú (BCRP) as the main institution responsible for producing statistics on national income and the balance of payments (Law No. 10640, August 24, 1946). Barreto, who had become Chief of the Research Unit at the BCRP in March 1946, was also appointed alternate governor to the

IMF by the BCRP's Board of Governors (BCRP 1999: 191). In 1949, he produced the first report of national accounts for Peru, titled *Renta Nacional del Perú* (National Income of Peru). In its various editions, the report included data on factor shares as well as the input data used in their production.

During the 1960s, BCRP changed the methodology of national accounts in response to criticisms of its policy recommendations from the Instituto Nacional de Planificación (INP).¹ INP reported higher growth estimates than BCRP and denounced that conservative policies implemented by the monetary authority were lowering Peruvian economic performance. While BCRP emphasized the principle of tight monetary policy, INP insisted on the strategy of Import Substitution Industrialization (ISI). According to some of its detractors, the INP initiated a political war against the BCRP due to its alignment with leftist ideologies.²

Members of the Board of Governors of the BCRP acknowledged the problem and argued that private banks might lose confidence in the technical opinions of the institution.³ They proposed a change in the methodology to calculate national accounts, under the assumption that the main issue was an underestimation of growth rather than the lack of appropriate development policies. As a result, the BCRP published the report *Cuentas Nacionales del Perú 1950-1965* (National Accounts of Peru 1950-1965) in 1966.⁴ This document introduced a second wave of factor income shares starting in 1950, based on the 1953 United Nations System of National Accounts (SNA). With its new organic law (Law No. 17044 - Supreme Decree No. 295-68-HC), the BCRP became the sole institution responsible for producing national accounts, reinforcing its leadership in statistical production. Consequently, the institution released four additional editions of *Cuentas Nacionales del Perú* until 1976 and reported the series in its *BCRP Yearly Reports*.

However, the production of Peruvian national accounts experienced a significant change after Velasco's military coup of 1968. Velasco's junta created the Comisión Técnica Interinstitucional de Cuentas Nacionales (Interinstitutional Technical Commission of National Accounts), which included representatives from the Ministry of Economics and Finance, the BCRP and INP, and from the National Office of Statistics and Census (ONEC). This measure ended BCRP's monopoly on the

¹The INP had been established by the military junta of Ricardo Pérez Godoy through Decree-Law No. 14220 on October 19, 1962, under the technical guidance of the Executive Secretary of the Economic Commission for Latin America (ECLA), structuralist economist Raúl Prebisch. See Minutes of the Peruvian Cabinet – Ricardo Pérez Godoy (1962-1963), vol. 1, page 56, September 4, 1962, Biblioteca Central Pedro Zulen, UNMSM.

²See *El Comercio*, November 19th, 2017; July 8th, 2020.

³Minutes of the Board of Governors, No. 2146, December 27, 1963, Banco Central de Reserva del Perú - BCRP.

⁴BCRP requested support from a technical mission sent by the IMF in November 1963, led by Charles F. Schwartz, Deputy Director of the IMF's Western Hemisphere Department and former associate of Simon Kuznets at the National Income Division of the US Department of Commerce. The mission assisted the new Chief of the BCRP's National Accounts Division, Richard Webb, in producing the new national accounts. See Minutes of the Board of Governors, No. 2217, August 13, 1965, Banco Central de Reserva del Perú - BCRP.

production of national accounts and promoted coordination among different governmental agencies. Based on the goals of Velasco's Military Junta, the new system was responsible for adapting the national accounts to the objectives of national planning.

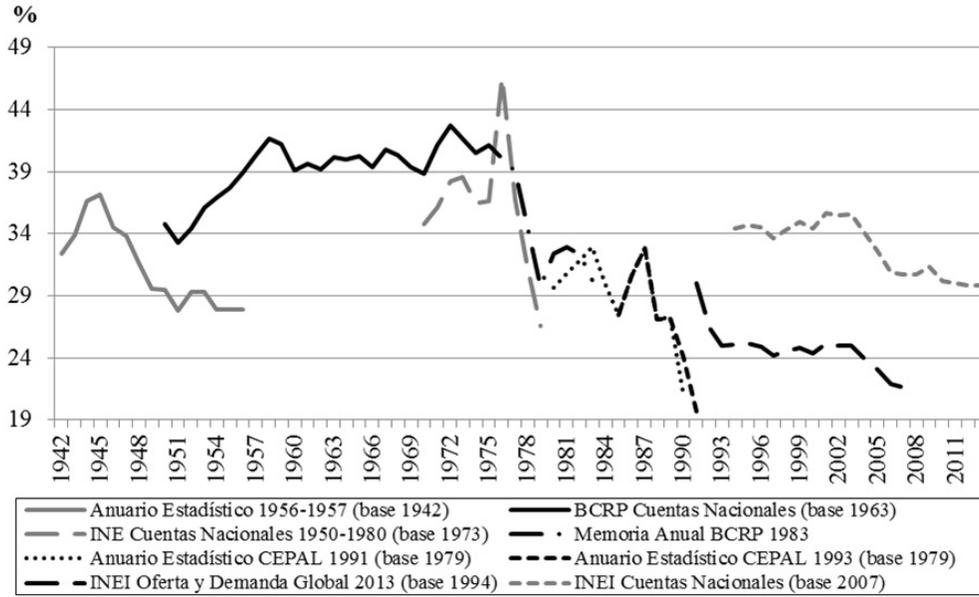
This new system of national accounts was only completed in 1975, during the new junta of Morales Bermúdez. The new Instituto Nacional de Estadísticas (INE) became responsible for finishing the calculations for the base year 1973. Additional series were produced by INE in the *National Accounts* reports of 1980 and 1981, which only included factor income shares starting in 1970, adding to the discontinuity regarding the BCRP's reports. INE's documentation had the advantage of following the 1968 SNA but did not include series of the mixed income share, an account that was clearly defined in previous reports.

In the late 1980s, the experience of hyperinflation increased the cost of computing factor income shares. This contributed to ending the publication of factor shares in the *BCRP Yearly Reports* in 1990, when the National Accounts Division stopped producing GDP series measured with the income method. The hyperinflation episode also produced changes in the national currency that made it difficult to maintain continuous national accounts. The national currency changed from soles oro to intis (the equivalent of 1,000 soles oro) in 1985, and then from intis to nuevos soles (1,000,000 intis) in 1991. In response to the hyperinflation, changes in the policy regime of the 1990s (Fujimori's dictatorship and structural adjustment period) led to a renewal in the BCRP's leadership. Technocrats at the time were suspicious about the utilization of factor income shares and described them as "populist" concepts (Durand 2003).

Under this new regime, the INE—renamed the Instituto Nacional de Estadística e Informática (INEI) in 1990—became the sole institution, alongside the BCRP, responsible for producing national accounts and factor income shares. The new series generated by INEI, with 1994 as the base year, were based on the 1993 System of National Accounts (SNA) and excluded mixed-income shares, covering the period from 1991 to 2012. In 2014, INEI released a new set of national accounts, along with the 2007 input-output table, following the 2008 SNA guidelines. These data, starting in 1994, included mixed-income shares but continued to exclude data on the consumption of fixed capital. As with previous publications, these factor income shares are only available for the period 1994-2022.

Despite the availability of several national account reports, neither INEI nor BCRP have reconstructed a comprehensive long-run series of wage, profit, and mixed-income shares beginning in 1942. Consequently, most Peruvian studies on income inequality focus on personal income distribution obtained from the National Household Surveys (ENAHO). Macroeconomic aggregates of income distribution have not been a priority for specialists or public institutions over the last thirty years. Furthermore, the frequent changes in the construction of these series have resulted in a fragmented and chaotic dataset that requires significant treatment for consistency and analysis (see [Figure 1](#)).

Figure 1: Discontinuity of the Wage Share



Source: Castillo (2015)

2.2 Peruvian Factor Income Shares in Historical Perspective, 1942-2022

In this section I analyze the historical evolution of Peruvian factor shares according to identity in [equation 1](#), which represents gross domestic product (GDP) measured with the income method for different t years:

$$GDP_t = Wages_t + \Pi_t + Mix_Inc_t + CFC_t + T_P_t \quad (1)$$

According to this equation, GDP is equal to the sum of wages ($Wages$), the aggregate sum of profits (Π), the aggregate account of mixed income (Mix_Inc), the consumption of fixed capital (CFC) that represents the depreciation of capital, and the sum of taxes and subsidies on production (T_P). In order to solve the problem of discontinuity, this accounting template will be a reference point to compute the interpolation of the series according to the methodology in the [Appendix](#).

After obtaining the accounts of the GDP in levels, I calculated the factor income shares as the ratios of those accounts over the GDP in percentages. In this way, it is possible to avoid any inadequacies in the historical evolution of the factor income shares. With those reconstructed series, I can recount the history of the Peruvian political economy in the period 1942-2022. In this section, I also included a the agricultural and non-agricultural components of the mixed-income share. This distinction can tell us a lot about the evolution of the productive structure in Peru. The final template for the

historical analysis of the factor income shares looks like this:

$$Wage_share_t = \frac{Wages_t}{GDP_t}$$

$$Mix_Inc_share_t = \frac{Mix_Inc_t}{GDP_t}$$

$$Profit_share_t = \frac{\Pi_t}{GDP_t}$$

$$Mix_Inc_share_t = Agr_Mix_Inc_share_t + Non_Agr_Mix_Inc_share_t$$

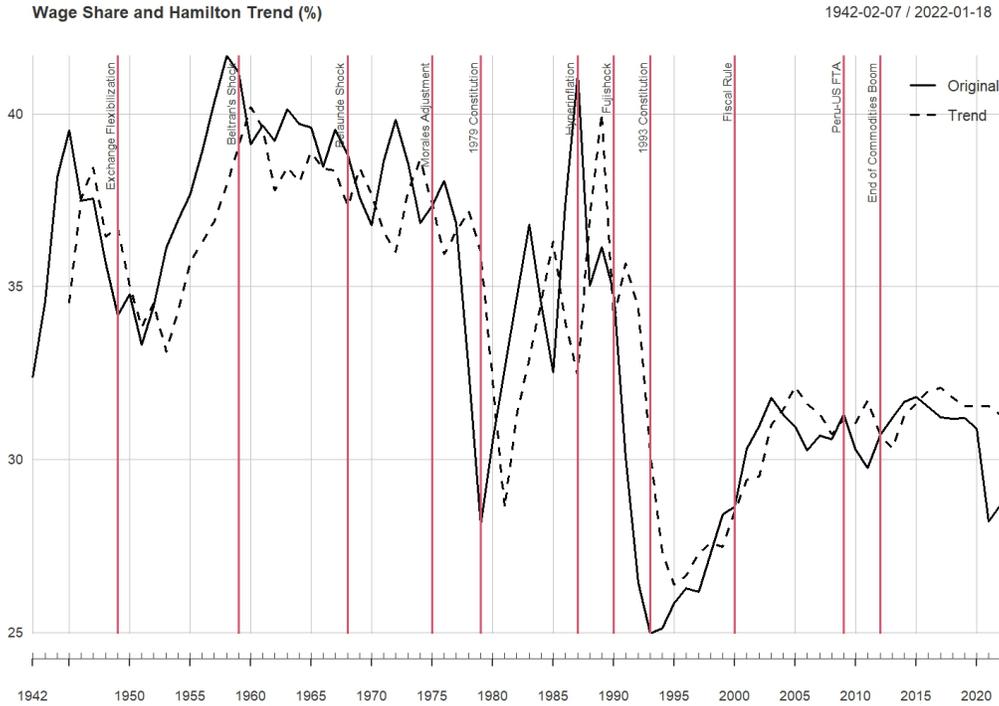
I use these data series to characterize the distributive reversal between wages and profits. To examine the evolution of Peruvian factor shares in the context of neoliberal economic policies, I applied a trend obtained from the Hamilton filter (Hamilton 2017).⁵ Additionally, I followed a list of key economic policy events and structural phenomena that have shaped the Peruvian economy since the 1940s (Table 1). The policy actions of technocrats and business elites in Peru reflect successive waves of neoliberalization, which have generally aligned with broader efforts to restore capital profitability (Plehwe, Slobodian and Mirowski 2020).

Table 1: Events of Neoliberalization in Peru, 1940-2012

Year	Policy Events
1949	Flexibilization of the exchange rate
1959	Prime Minister Beltrán's austerity shock
1968	President Belaunde's austerity shock
1975	Morales-Bermúdez's fiscal adjustment
1979	Constitutional Assembly - Social Market Economy Constitution 1
1987	Hyperinflation
1990	Fujimori's Stabilization Plan ('Fujishock')
1993	Constitutional Assembly - Social Market Economy Constitution 2
2000	Implementation of a new fiscal rule
2009	Free Trade Agreement between Peru and the USA
2012	End of Commodities Boom (start: 2000)

⁵The implementation of the Hamilton filter requires the R package 'neverhpfiler' (Shea 2021). I utilized the function 'yth_filter' from this package with parameters $h = 2$ and $p = 2$, which replicate similar results to those obtained with a Hodrick-Prescott filter using $\lambda = 100$. Therefore, Hamilton's filter generates three missing values at the beginning of each series.

Figure 2: Wage share and Hamilton Trend, 1942-2022



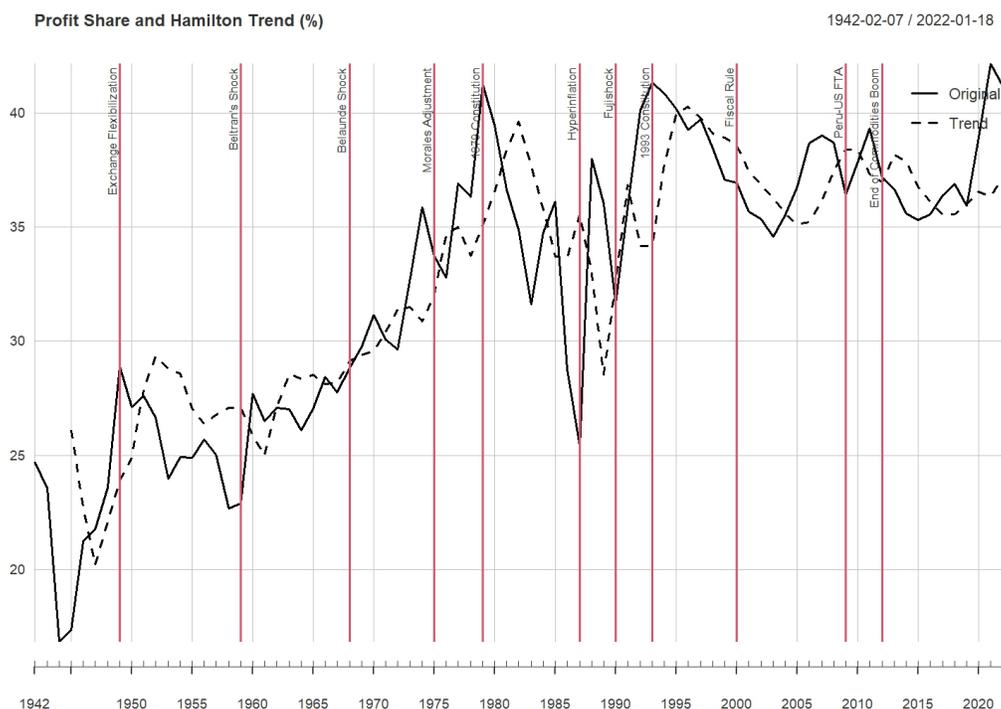
To understand the impact of each of these policy and structural events on profitability, I examine the rate of surplus value or rate of exploitation, which is an aggregate calculated as the ratio between aggregate wages and aggregate profits. This ratio serves as a macroeconomic proxy for the degree of monopoly (Kalecki 1938, 1943) and indicates the relative advantage of capital over labor. In other words, it functions as a proxy for the evolution of class struggle in Peru (Streeck 2011, Rugitsky 2013, Mattei 2022):

$$exploitation_rate_t = \frac{\Pi_t}{W_t} \quad (2)$$

Figure 2 illustrates the evolution of the wage share of GDP and its Hamilton trend. The wage share in the Peruvian economy has never exceeded 42% of GDP. The highest wage shares, observed in the 1950s and 1960s, reflect the economic benefits derived from international economic growth, facilitated by exchange rate flexibility. During this period, increased demand for raw materials provided significant economic advantages to Peru's dependent economic structure. In contrast, reductions in the wage share occurred due to adjustment policies, which will be detailed in this section, and economic crises due to its external dependence. As a consequence of the latter Peru also underwent a constrained modernization process which created further crises.

In the distributive conflicts of 1940s-1950s Peru, representatives of capital made efforts to establish

Figure 3: Profit Share and Hamilton Trend, 1942-2022



lasting free-market institutions aimed at addressing foreign exchange and fiscal crises. At the start of the postwar period, neoliberal economists and businessmen supported Manuel Odría's coup d'état and the attempt to lift the exchange controls imposed in the mid-1930s, which were defended by Víctor Raúl Haya de la Torre's Popular Revolutionary Alliance of America (APRA). Odría's junta enacted Decree Law No. 11208 in 1949, which suspended exchange rate parity and led to a devaluation (Portocarrero 1983). During Odría's regime, the wage share fluctuated around 39% and the profit share did so around 26% (see Figure 3). In the late 1950s, under Beltrán's austerity plan and profit-led policies, the profit share increased from 22.9% to 27.1% as shown in Figure 3, while the wage share decreased by 2 percentage points (see Figure 2).

In 1968, General Juan Velasco Alvarado led a junta that established the Revolutionary Government of the Armed Forces. Alongside nationalizations, the regime introduced significant distributive measures, including a radical land reform in 1969 (Decree Law No. 17716). Velasco's government also promoted various forms of self-management, such as agricultural cooperatives in 1969 (Supreme Decree No. 240-69-AP), industrial communities—a radical form of codetermination in manufacturing, fishery, mining, and telecommunications industries—in 1970 (Decree Law No. 18384), and a law on social property enterprises (EPS)-collective and workers owned enterprises- in 1974 (Decree Law No. 20598). During the period 1968-1974, the average wage share was 38%, with a peak of 39.8%. Concurrently, the profit share decreased to 29.6% in 1972, with an average of

31.5% (see [Figure 2](#) and [Figure 3](#)).

Although the initial outcomes of the land reform improved the well-being of newly salaried workers in sugar agricultural cooperatives (Roca 1975), its distributive effects were short-lived (Figueroa 1973, Webb and Figueroa 1975). According to [Figure 2](#), the wage share initially rose to 39.8%, but declined to 36.8% by 1974. This reversal can be attributed to several factors, including the lack of technical support for agricultural cooperatives and external shocks impacting the agricultural sector (Caballero and Álvarez 1980). However, the first significant decline in the wage share coincided with a looming balance of payments crisis that struck the Peruvian economy in 1975. Capitalizing on this situation, General Francisco Morales-Bermúdez, then Prime Minister, orchestrated a coup against Velasco, leading to what became known as the Second Phase of the Revolutionary Government.

As a result of the recurring crises experienced during the 1950s-1960s and the increase in urban population in a non-industrialized economy, self-employment income became a significant component of the national product. However, as shown in [Figure 4](#), the proportion of mixed income fell from 35% to 20% between the late 40s and mid-70s. After 1974, the share of mixed income stabilized, oscillating between 20% and 25%. This sharp decline can be attributed to several factors: migration from rural areas, urbanization, the growth of the tertiary sector, and the deterioration of terms of trade that negatively impacted agriculture. In [Figure 5](#), the share of agriculture in mixed income trends downward until 1972, while the non-agricultural component remains steady. This stability reflects the consistent urban self-employment share in GDP, including micro-business owners and informal workers. Concurrently, this effect can be linked to contemporary policy changes. In February 1976, Morales-Bermúdez's Second Phase promoted a new Small Businesses Law (Decree Law No. 21435) to replace the EPS law and atomize manufacturing firms.

The continuous implementation of stabilization plans during the late 1970s triggered significant reactions from trade unions in both private and public enterprises. Under Morales-Bermúdez's dictatorship (1975-1980), workers lost their relative advantage compared to capital. In 1977, the new junta modified the regime of cooperatives in the industrial communities (Decree Law No. 21789), enabling workers to become owners of manufacturing firms. One year later, the new law of employment established conditions to increase labor flexibilization (Decree Law No. 22126) (Sulmont 1978). In response, a prominent union, the Central General de Trabajadores del Perú (CGTP), organized a national mobilization in 1977. As a result, the regime experienced the highest rates of labor unrest in the 20th century, with workers involved in strikes representing 41% of salaried employment in 1977 and 43.6% in 1978 (ILO 2023) (see [Figure 22](#)). The exploitation rate, which according to [equation 2](#) indicates capital's ability to extract value from salaried labor, increased from 0.97 to 1.47 in 1978 (see [Figure 6](#)).

Implemented in 1980 alongside price increases and budget cuts, liberalization policies ultimately

Figure 4: Mixed-income share and Hamilton Trend, 1942-2022

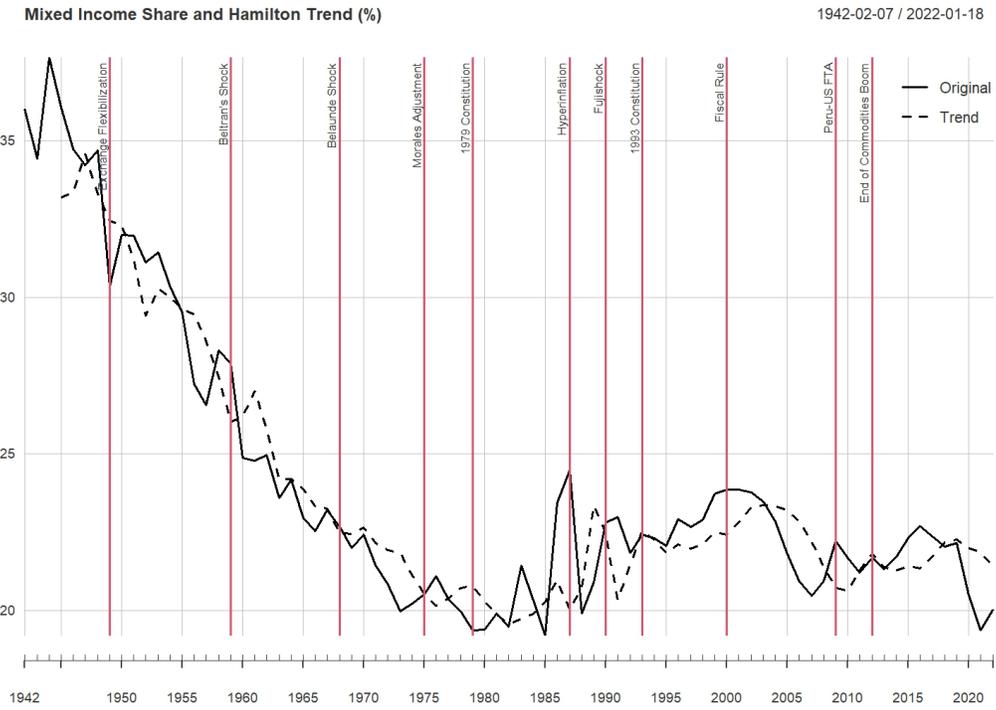


Figure 5: Agriculture and non-agriculture mixed income shares, 1942-2022

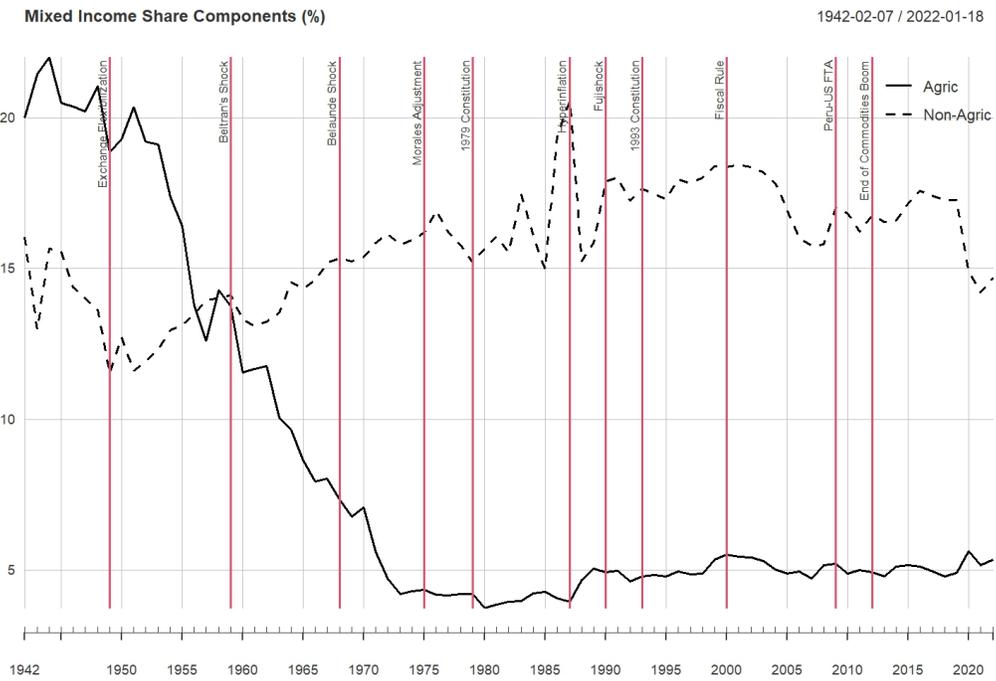
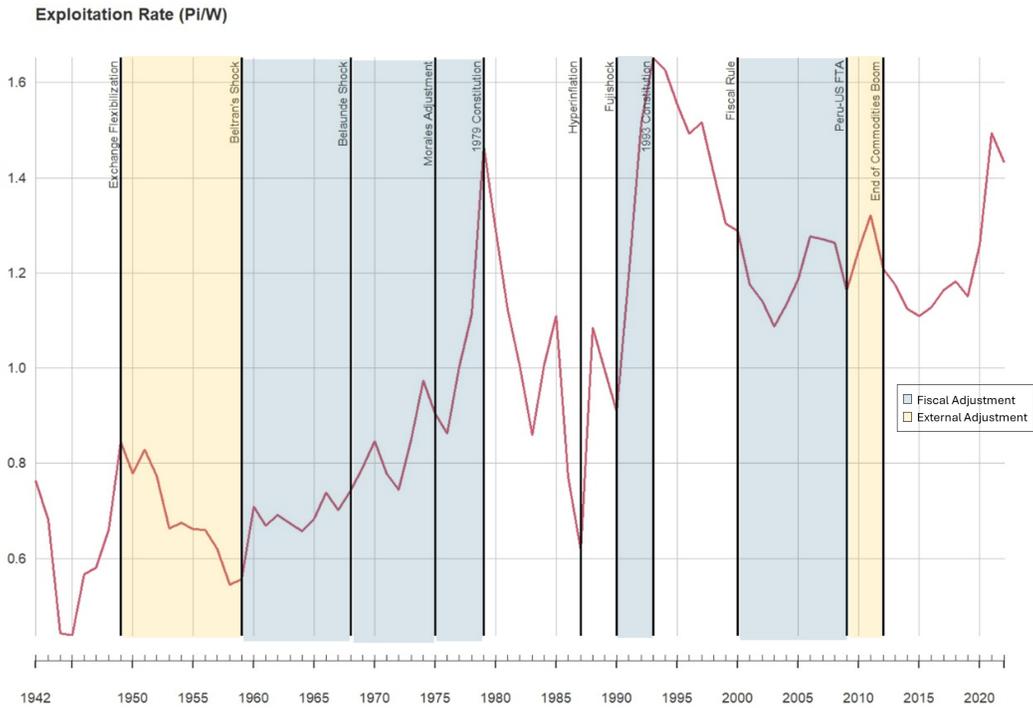


Figure 6: Exploitation Rate, 1942-2022

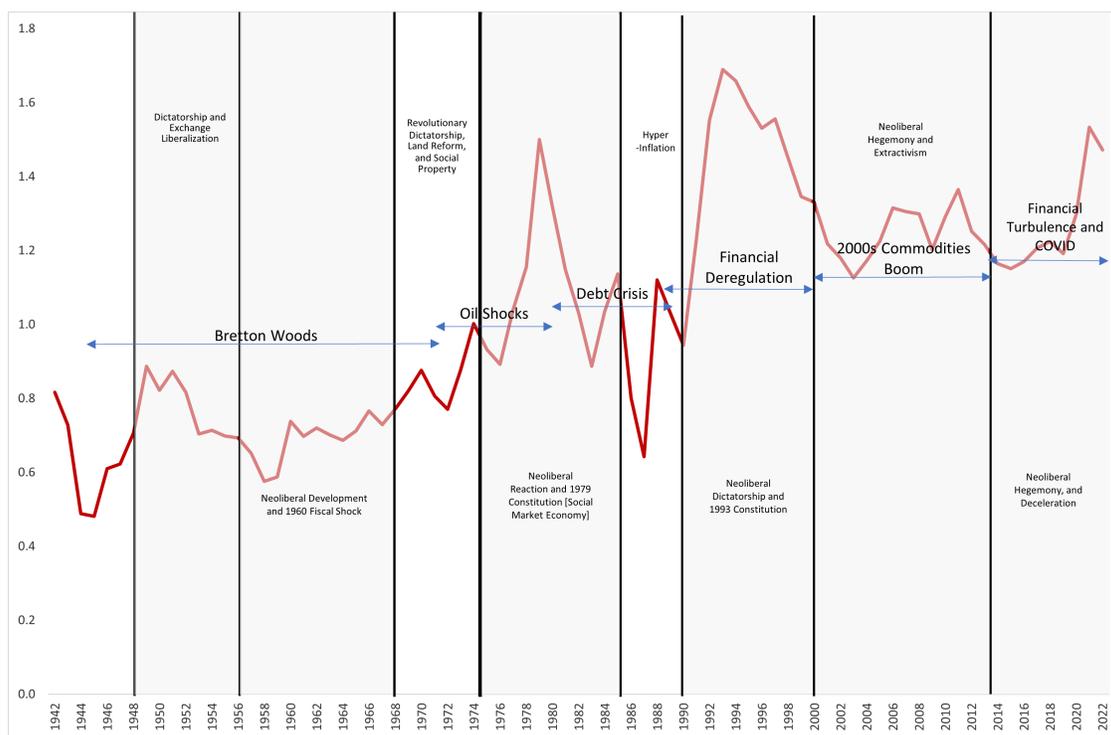


failed to achieve their intended goals and instead contributed to economic instability. The liberalization policies worsened the economic decline by accelerating the deindustrialization of an already noncompetitive manufacturing sector and creating a mismatch between tariff and exchange rate policies, which negatively impacted the agricultural industry (Wise 2003). In short, the government reversed its policies in response to their impact on capitalists' profits, while neglecting the small manufacturing businesses. Between 1980 and 1983, the wage share increased from 30.5% to 36.8%, while the profit share declined from 39.4% to 31.6%. Consequently, the exploitation rate declined from 1.3 to 0.9 (see [Figure 2](#), [Figure 3](#) and [Figure 6](#)).

During the second half of the 1980s, the primary challenge was the high inflation, which ultimately led to increased dollarization of the economy by the late 1980s (Alarco 1984). An economic crisis was imminent just before the new APRA government, led by Alan García, took office in July 1985. García's economic team proposed a stabilization plan that differed from previous measures. Unlike the IMF's monetarist approach, the team introduced a 'heterodox program' to address inflation, though it was only partially implemented. For instance, the promised demand-led policies contrasted with the timid increase in fiscal spending executed in 1985-6.

The initial results of the anti-inflationary plan benefited the informal sector, which had increased after 1974 (Schuldt 1987). Along with this phenomenon, a rise in capital outflows generated a

Figure 7: Political Cycles, International Financial System, and Neoliberalism in Peru, 1942-2022



financial disequilibrium (Thorp 1987). As protests increased in 1988, the Peruvian economy faced severe fiscal and monetary imbalances, along with the worst hyperinflation in the country’s history. The national price level soared from 85% in 1987 to 667% in 1988, 3,398% in 1989, and 7,482% in 1990. The situation was exacerbated by the effects of terrorism and the deterioration of the international economic order.

As a result, economic growth plummeted to -9% in 1988 and -12% in 1989. The hyperinflation severely impacted wages, but businesses and the banking sector used alternative mechanisms such as foreign currency holdings, devaluation, and other subsidies from the government. Consequently, the profit share increased from 25.4% in 1987 to 36% in 1989. In contrast, the wage share declined from 41.2% in 1987 to 36.2% in 1989, while the mixed-income share, representing the informal economy and small businesses, declined from 24.5% to 20.9% (see Figure 2, Figure 3 and Figure 4). Between 1980 and 1989, the exploitation ratio moved from 1.29 to 0.99. Yet, the latter figure demonstrates the recovery of profits’ power, which had declined to 0.62 in 1987 (see Figure 6).

After winning 1990 elections while proposing a non-orthodox shock, president Fujimori implemented a stabilization package producing significant changes in factor shares distribution. In August 1990, Fujimori began implementing the initial measures of his so-called Fujishock. The program started with a price liberalization that quickly led to an increase in average living costs

and a decline in real wages.⁶ In February 1991, Minister of Economy and Finance Carlos Boloña, implemented an economic program comprising (i) new fiscal and monetary policies, (ii) trade liberalization, (iii) financial liberalization, (iv) reforms in the inputs and labor markets, and (v) state reform or the atomization of the government apparatus (Seminario and Fernández-Baca 1991). As a consequence, wage share declined from 34.8% to 26.4%, while the profit share rose from 31.6% to 40.1% between 1990 and 1992 (see [Figure 2](#), [Figure 3](#)). Concurrently, the rate of exploitation went from 0.9 to 1.5, the highest level it had ever reached since 1979 (see [Figure 6](#)). However, this rise in the price of consumption goods contrasted with the reduction in overall inflation from 7,482% in 1990 to 73.5% in 1992.

In the long run, these privatizations and liberalizations led to the concentration of the Peruvian economic structure around raw material exports and the implementation of regressive taxation policies (Thorp and Zevallos 2001). Between 1992 and 1994, economic growth increased from -1% to 12%. This positive trend continued until 1997, when the economy grew by approximately 6.5%. However, the institutions created by the Fujishock and the new regime of accumulation were characterized by outcomes of the distributive conflict that favored the profit share. Between 1992 and 1994, the wage share decreased by 1.3 percentage points. The rate of exploitation reached a historical peak of 1.7 in 1993, during the constitutional debate (see [Figure 2](#), [Figure 3](#) and [Figure 6](#)). Following the shock, economic growth recovery led to a reduction in unemployment that pushed down the levels of exploitation to 1.1.

In 2000, the fully autonomous Ministry of Economy and Finance implemented a law of fiscal rule (Law No. 27245) which limited fiscal spending and public debt to manage aggregate demand and target inflation. On the other hand, alongside the commodities boom that began in 2002 and further trade opening (e.g., 2009s Peru-USA FTA), Peru experienced a rate of exploitation that fluctuated around 1.2, while the wage share hovered around 30%. Since 2006 the BCRP has been justifying traditional wage repression to manage inflation.⁷ In response to the decline in commodity prices, BCRP proposed freezing the minimum wage. After the COVID pandemic these measures remained in place resulting in levels of exploitation around 1.5, similar to those experienced in the mid-1990s but with a declining wage share around 28.7% (see [Figure 2](#), [Figure 6](#)).

⁶See *Quehacer*, num. 66, September-October 1990.

⁷See *La República*, June 2, 2023; *Diario Gestión*, July 4, 2024.

3 Income and Wealth Taxation in 20th Century Peru

3.1 The Origins of Regressivity, 1930-2022

Historical evidence shows that Peruvian technocrats and business associations perpetuated two inherent problems of the tax income system at the beginning of the 20th century: the lack of uniformity in direct contributions, and the endemic problem of tax evasion, which until the mid-20th century was mainly due to the utilization of financial instruments like bearer shares. To evaluate the evolution of both tax income and welfare policies in Peru I reconstructed aggregate income data based on the DINA template following the next identities:

$$NNI_t = GDP_t + NFI_t - CFC_t$$

$$PTDI_t = NNI_t - T_P_t - T_Dir_t + Net_Soc_Transf_t - Soc_Benef_t$$

$$Net_Soc_Transf_t = Soc_Transf_t - Soc_Contr_t$$

Based on Blanchet, Chancel, Flores, Morgan et al. (2024), the net national income or pre-tax national income (NNI_t) is the main account of reference obtained by adding net foreign income (NFI_t), and by subtracting the consumption of fixed capital (CFC_t) from GDP. On the other hand, the Post-tax disposable income ($PTDI_t$) (national income after taxes and replacement income) is the post-transfer income before in-kind transfers and government spending. T_P_t is the sum of indirect taxes (taxes on consumption, production, exports and imports), T_Dir_t is the sum of the direct taxes (income and wealth taxes), $Net_Soc_Transf_t$ is the net income from the social insurance system (replacement income), and Soc_Benef_t represents the sum of social assistance benefits in cash provided by the government (see [Appendix](#) for a more detailed explanation of each account).

The tax system of the new Republic of Peru was heavily influenced by the colonial tax structure that preceded it, rather than being based on income-related criteria (Contreras 2006). Between 1826 and 1854, the Peruvian Ministry of Treasury collected two main types of taxes: (1) a poll tax on Indigenous peoples (*contribución de indígenas*) and (2) a personal, property, and income tax on non-Indigenous groups, collectively referred to as the *contribución de castas*. The *contribución de castas* was comprised of several taxes, including the *contribución general* (a poll tax for the non-Indigenous population), a property income tax (*contribución de predios rústicos y urbanos*), and the income tax on professions or licenses (*contribución de patentes or gremios*). Kubler (1952) organized these categories in [Table 2](#), differentiating between land tenants, workers of various ethnic backgrounds, and artisans.

Table 2: *Classes Designated by the Peruvian System of Taxation Before 1854*

Class	Tax (Contribución)
Landowners and tenants	<i>contribución de predios urbanos y rústicos</i>
Artisans	<i>contribución de patentes (or gremios)</i>
Mestizo and African-Peruvian laborers	<i>contribución de castas</i>
Indian laborers	<i>contribución de indígenas</i>

During the Great Depression, a project to reform the income tax system was developed under the advisement of a technical mission led by American economist Edwin Kemmerer in 1931. The mission was hired by the Peruvian government to address the ongoing monetary and fiscal crises. As part of the proposed fiscal reforms, the mission recommended a new Law of Income Taxation to complement the monetary policies. Kemmerer highlighted that Peru's primary issue was its heavy reliance on indirect taxes, which were structured in response to the boom cycles of commodity prices, as well as the complex and outdated income tax system (BCRP 1997).⁸ While key monetary reforms, including Peru's maintenance of the Gold Standard and the establishment of the BCRP, were enacted, the fiscal reforms proposed by Kemmerer were ultimately abandoned. The Constitutional Assembly and the Board of Governors of the Central Bank, headed by neoliberal economist Pedro Beltrán, dismissed these reforms, citing the political polarization of the period and the economic crisis as justifications for inaction (BCRP 1997).

The public debate over the new tax law was both complex and highly contested, shaped primarily by technocratic processes. In January 1933, the Minister of Treasury and Commerce submitted a draft bill for income tax reform to Congress, aiming to unify various direct contributions in order to improve tax collection and stabilize the fiscal budget according to austerity principles. The response from the capitalist class was swift. In February, representatives from major business associations—including the Chamber of Commerce of Lima (CCL), the National Agrarian Society (SNA), the National Society of Industries (SNI), and the National Livestock Society (SNG)—submitted critiques of the tax reform to Congress's Commission on the Treasury (Ferrero 1963a), advocating for even more radical austerity measures.⁹ The strong stance taken by these business associations gave the SNA the opportunity to lead the government's Main Budget Commission, established by the Peruvian Congress in April 1931 (Decree Law 7110), which acted as a corporatist mechanism for

⁸Kemmerer's Draft Bill of Income Taxation proposed reducing several indirect taxes and implementing a uniform income tax. Additionally, it included the taxation of bearer shares as part of complementary reforms aimed at mitigating the negative effects of the financial crisis. As noted in Kemmerer's report accompanying the Draft Bill, the proposed income tax was more equitable, generated higher revenues, and was adaptable to fiscal emergencies (BCRP 1997).

⁹See *La Vida Agrícola*, vol. 8, num. 86, January 1931; vol. 9, num. 101, April 1932. The SNA, through its media outlet *La Vida Agrícola*, advocated for the economic interests of the agricultural and cattle producers.

Figure 8: Composition of Net National Income, 1942-2022

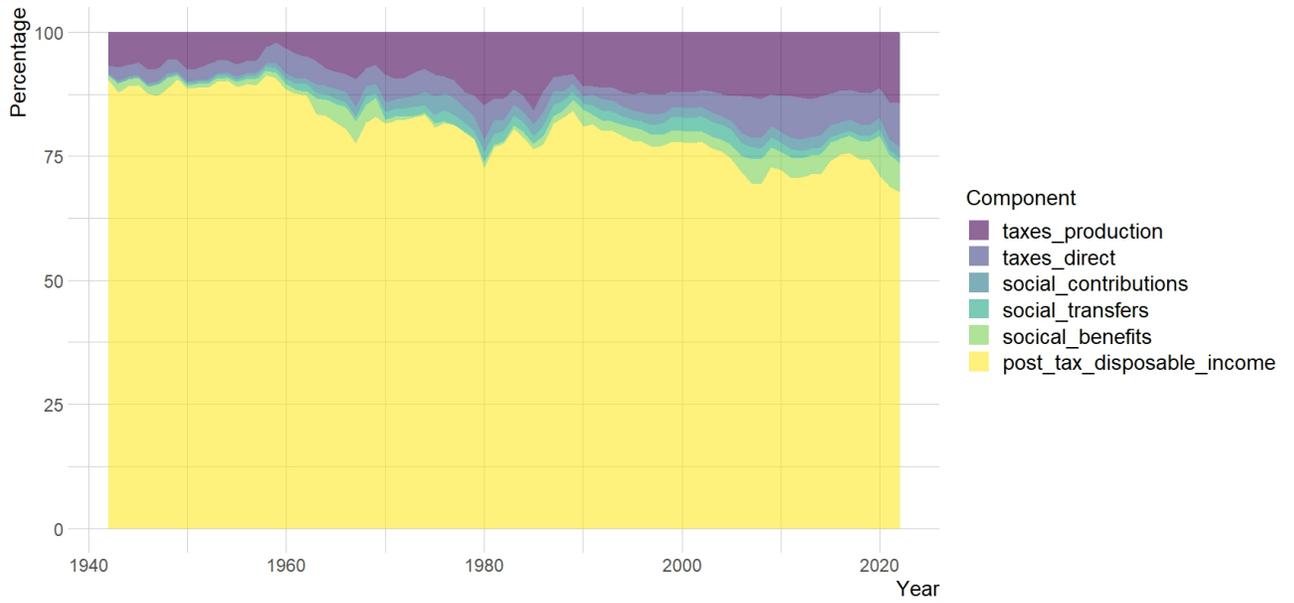
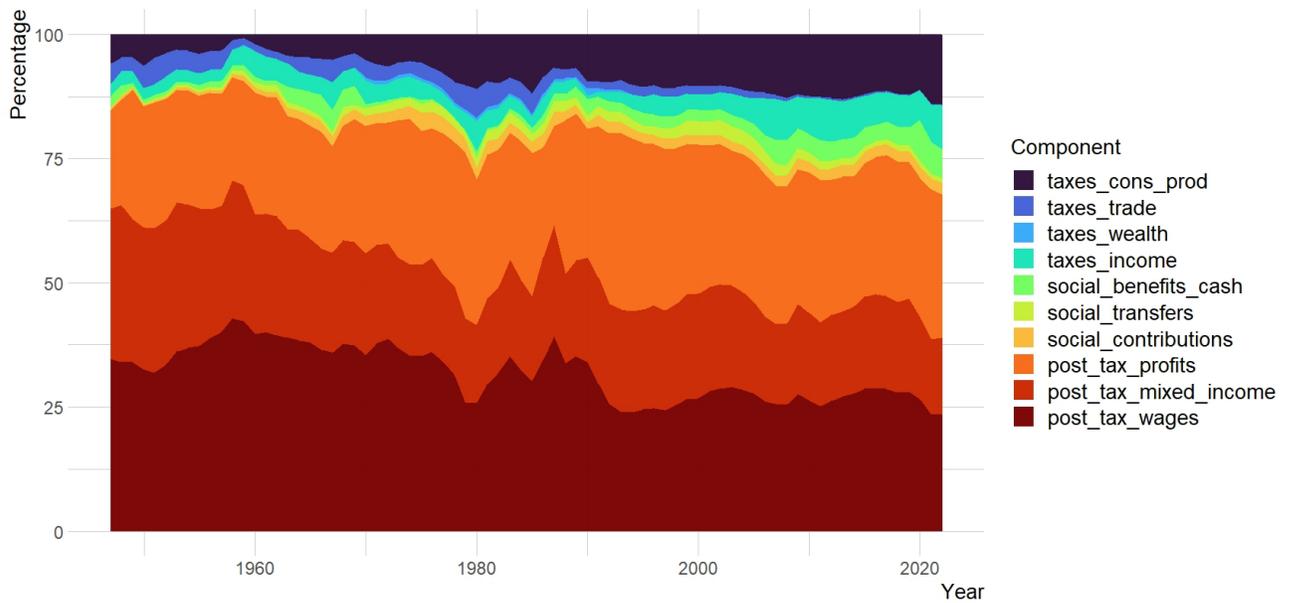


Figure 9: Composition of Post-Tax Disposable Income, 1942-2022



designing policies that restored profitability in favor of the business class.¹⁰

In an effort to protect their profits, the business class's interventions delayed the implementation of the new income tax law. In May 1933, the Congress's Commission on the Treasury proposed a new draft for the tax reform, clearly influenced by the recommendations of the business associations.¹¹ The Commission, which included liberal and fascist congressmen, criticized three main issues in the Ministry's draft: the lack of clarity in defining taxable income, the imposition of a tax on financial transactions, and so-called excessive tax rates. Additional critiques appeared in a memorandum submitted to Congress by the business associations.¹²

After the debate resumed, the Commission on the Treasury submitted a final draft to the executive branch. This document, heavily influenced by the Chamber of Commerce of Lima (CCL), clearly favored the business associations. It deviated significantly from the original January 1931 bill draft and introduced a corporatist element to involve capitalists in taxation policy: the Superior Council of Taxation (Basadre 1963). The proposal also reflected the ideological stance of the CCL, which advocated for reduced taxation and argued that Peru was a "poor country where private capital is almost nonexistent" (Basadre 1963). On October 11, 1933, Congress authorized the executive branch to enact the final draft (Law No. 7837).¹³ In July 1934, the Peruvian government enacted the income tax reform (Law No. 7904).

However, the law retained many flaws and deviated from Kemmerer's recommendations. The tax reform maintained a schedular structure, which undermined tax uniformity. It introduced seven different types of income taxes, including a securities income tax, profits tax, urban and rural property taxes, wage income tax, and a complementary progressive income tax. Despite the inclusion of a progressive tax, its low rates severely limited its effectiveness. Moreover, the law failed to address the use of bearer shares as a tool for tax evasion, an issue previously highlighted by Kemmerer. This omission was largely due to the influence of technical advisers from the CCL (Basadre 1963: 196).

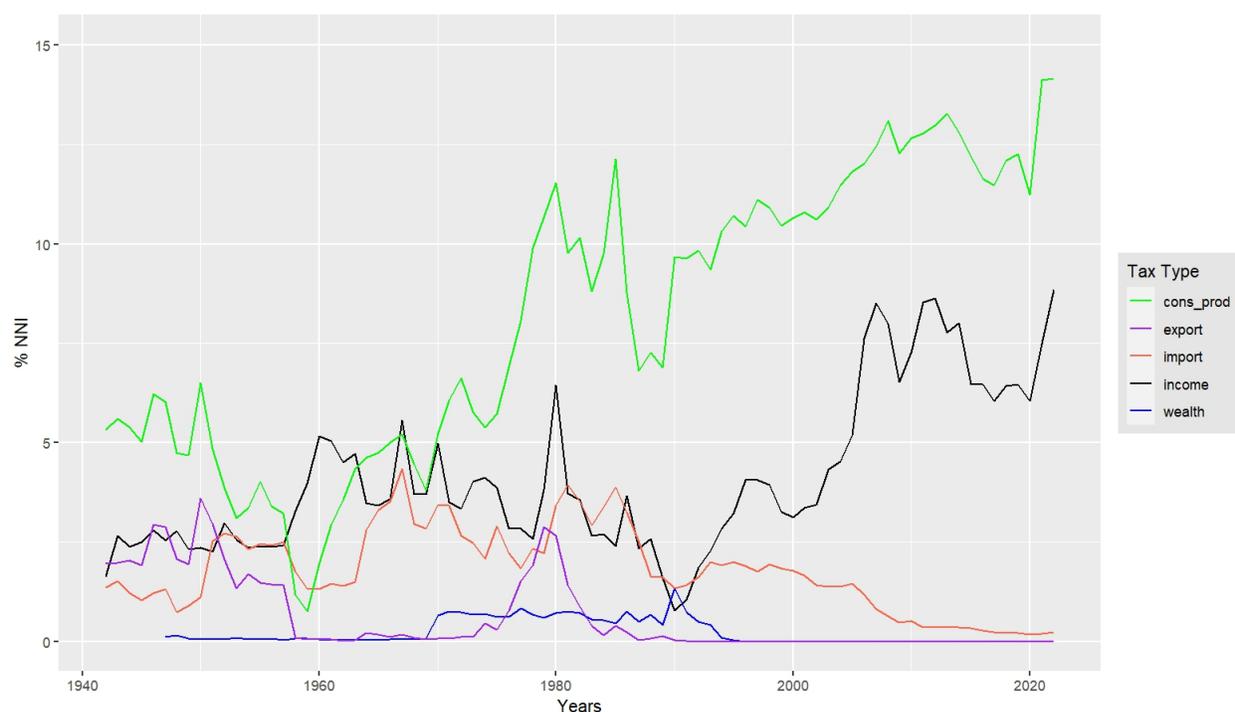
¹⁰A prominent figure of SNA, Benjamín Roca García, became the head of the Commission, which aimed to address the economic crisis by avoiding increases in tax and spending. He proposed addressing the fiscal crisis by reducing government payrolls and lifting price controls. Roca García criticized the bureaucracy for supposedly exacerbating the economic downturn, noting that sectors like agriculture, mining, and labor were suffering while civil servants' wages remained unaffected. His ideas were encapsulated in his press article *El problema fiscal del Perú* (The Peruvian Fiscal Problem) published by *El Comercio*. However, Roca García's proposal was ultimately deemed too radical by the government, leading to the rejection of the Main Budget Commission's policy recommendations.

¹¹Minutes of the 1931 Constitutional Congress, vol. 12, num. 60, pages 1471-8, May 10, 1933, Congreso de la República del Perú.

¹²Minutes of the 1931 Constitutional Congress, vol. 12, num. 61, pages 1481-4, May 11, 1933, Congreso de la República del Perú.

¹³See "El proyecto de la Comisión de Hacienda a que se refiere la autorización de la Asamblea Constituyente conferida al Poder Ejecutivo por Ley No. 7837 de 11 de octubre de 1933" in *Sociedad Nacional Agraria* (1933).

Figure 10: Composition of Taxes, 1942-2022



The delay in reforming the income tax led to a concentration of fiscal revenues in indirect taxation, an important source of regressivity. Between 1942 and 1956, indirect taxes, including import, export, consumption, and production contributions, represented 8.66% of *NNI* (see ‘taxes_production’ [Figure 8](#)). Prior to 1949, the majority of this revenue came from production and consumption taxes, which constituted 62.23% of total indirect contributions. In 1950, this trend shifted and import and export taxes accounted for just over 42% of total indirect taxes, with export taxes representing around 76.44% of total trade taxes (see [Figure 9](#)). However, by 1951, the share of export taxes in total trade taxes decreased to 54.03%, accompanied by a slight decrease in export volumes and a rise in some export prices by about 2%. Import taxes recovered between 1950 and 1956, increasing by around 1.3 percentage points to represent 2.42% of *NNI*.

In the 1940s and 1950s income taxes represented a small portion of the *NNI*. Before the end of WWII, direct taxation accounted for no more than one third of indirect taxation (see [Figure 8](#)). In 1945, the income tax share of *NNI* was 2.50%. Before Odría’s coup d’état, the income tax did not increase significantly, fluctuating between 2.50% and 2.80% of *NNI*. Despite the increase in economic growth after 1949 (with growth rates fluctuating between 8% and 9%), direct taxation remained weak in the country. Between 1949 and 1956, the highest share of income tax on *NNI* was 2.99% in 1952.

Tax reform was done in 1968, when the Supreme Decree 203-68-HC was enacted. The new law

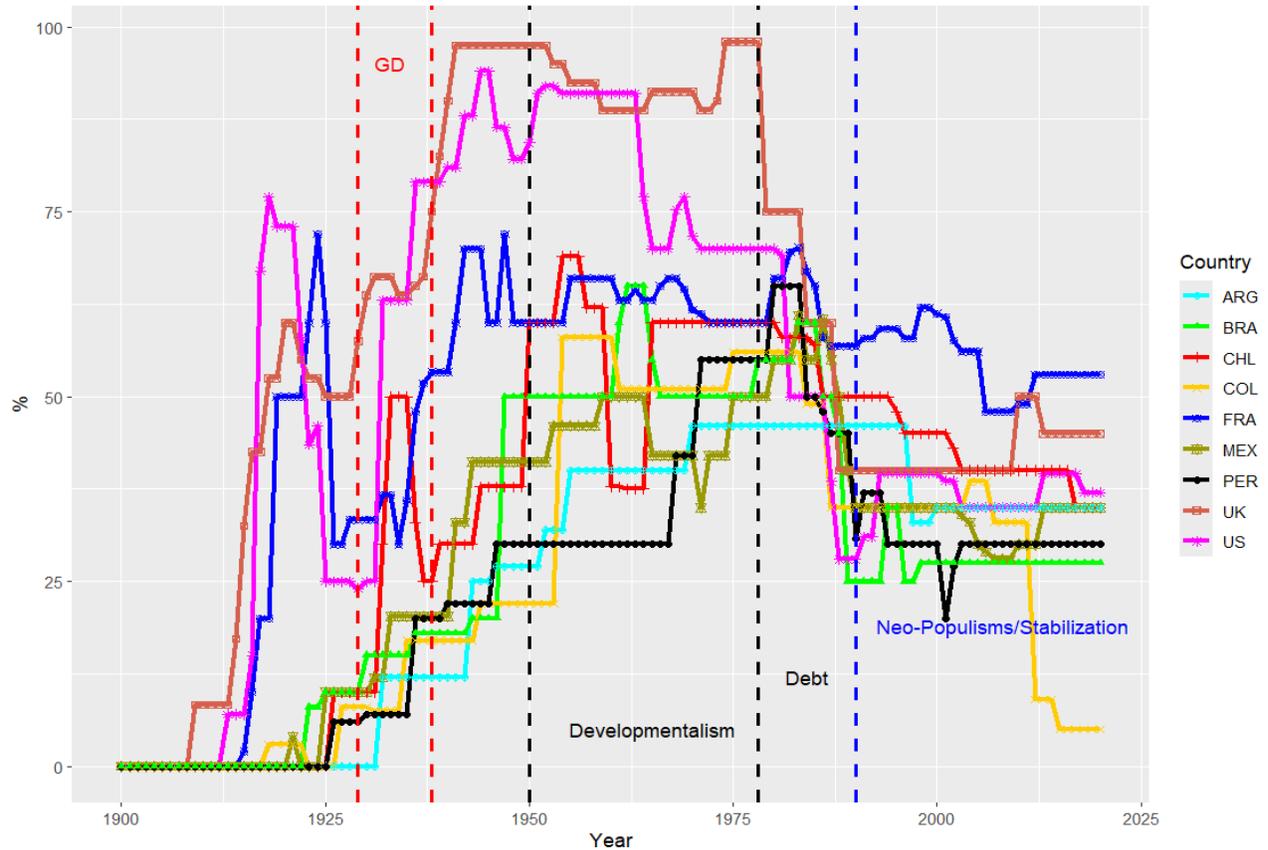
replaced the schedular income tax with a global income tax system. The reform introduced four significant changes: (i) the institution of a uniform income tax, (ii) the creation of a tax on private property, (iii) the implementation of a tax on shareholding equity, and (iv) the elimination of bearer shares (Capuñay 1969). The policy was influenced by foreign advice provided through the American development aid program Alliance for Progress, and the Joint Tax Program of the Organization of American States and the Inter-American Development Bank.

After the 1968 reform, the Peruvian tax system remained mostly the same. However, the problem of regressivity was not entirely solved, and tax collection was affected by the political and economic crises experienced by the country. Between 1968 and 1975, taxes on income increased from 3.70% of *NNI* to 5.73%. In contrast, taxes on consumption and production rose from 4.47% to 5.39% (see [Figure 9](#)). As it appears in [Figure 10](#), the post-1968 period displays an important increase in the share of taxes on consumption and production. Furthermore, the military dictatorship used tax exemptions on the profits of cooperatives, industrial communities, and EPS to promote self-managed enterprises. Notably, it was only during Velasco's government that the top marginal tax rates for the highest personal incomes—an indicator of personal income tax progressivity—began to rise. The rate increased from 30% to 55% in 1971, second only to Chile, which had a 60% rate. (see [Figure 11](#)).

In response to the crisis that began in 1975, the new junta of Morales-Bermúdez applied a series of tax exemptions to benefit private enterprises. At this time, income taxes as a percentage of *NNI* decreased from 3.86% in 1975 to 2.57% in 1978. This trend partially reversed, reaching 6.44% in 1980. The peak of the top marginal tax rate occurred between that year and 1985 in response to the Latin American Debt Crisis of the 1980s. In that period, the top marginal income tax rate reached 65%, surpassing those of Argentina, Brazil, Chile, Colombia, Mexico, and even the United States (see [Figure 11](#)). However, the share of the taxes on consumption and production on *NNI* rose from 5.73% in 1975 to 11.52% in 1980 (see [Figure 10](#)). This demonstrated the increasing relevance of consumption tax in the revenue structure, a sign of the modernization of the economy and of the contribution system in the country. In contrast, trade duties diminished as a share of the *NNI* but partially recovered from 3.20% in 1975 to 6.07% in 1980 (see [Figure 9](#)).

In late 1980s, two phenomena boosted tax regressivity: the increasing relevance of indirect taxation and the reintroduction of a semi-schedular income tax, coupled with a concurrent reduction in the top marginal tax rates for the highest personal incomes. The confluence of these phenomena coincided with the transformation of the former Dirección General de Contribuciones into the Superintendencia Nacional de Administración Tributaria (SUNAT), an autonomous office of the Executive branch, in 1988 (Law No. 24829, Legislative Decree No. 501). Indirect taxes became more significant than income and wealth taxes in the country. Between 1986 and 1993, the sum

Figure 11: Top Marginal Income Tax Rates, 1900-2020.



Source: González and Calderón (2002); Alvarado (2010); Morgan (2015); Flores, et al. (2020); Piketty (2022); Biehl, et al. (2025); Barcelos da Nóbrega (2025); Argentinian, Colombian, Mexican, and Peruvian Tax Legislation (many years). Before 1968, the data correspond to the complementary progressive income tax. For Mexico, they instead refer to the highest schedular tax rate when no complementary progressive income tax exists.

of direct taxes of *NNI* diminished from 4.42% to 2.68%. In contrast, indirect taxes lost only one percentage point due to the new significant role of value-added taxes and production taxes, which recovered from 8.77% to 9.35%. While import taxes decreased only from 3.25% to 1.99%, export taxes essentially disappeared, registering a share of 0.01% in 1991 (see [Figure 9](#) and [Figure 10](#)).

Beginning in the 1990s, Latin America entered the so-called neo-populist and stabilization period, and in Peru, Fujimori's regime solidified and strengthened an already regressive tax system. In late 1993, Alberto Fujimori enacted a new tax reform (Legislative Decree No. 774) that shifted the uniform income tax system back to a semi-schedular one. Additionally, Fujimori's administration removed inheritance, gift, and estate taxes from the legislation, reinforcing the earlier abolition of inheritance and gift taxes under Morales-Bermúdez. The 1993 tax reform reduced the top marginal tax rates to 30%, a rate that remains in effect today (see [Figure 11](#)).

Between 1994 and 2002, the average share of these indirect taxes represented 10.66% of *NNI*, while income taxes averaged only 3.47%. During the 2000s commodities boom (2002 to 2012), consumption and production taxes gained 2 percentage points, and income taxes gained 3.10 percentage points. However, the tax structure remained focused on consumption and production contributions, which represented almost 13% of *NNI* in 2012. After this period, the income tax share increased to 8.85%, while consumption and production taxes rose to 14.16%, representing the main source of revenues for the government under the current regime of tax regressivity (see [Figure 10](#)).

3.2 The Weak Performance of Property Redistribution and Social Welfare, 1930-2022

The history of the regressive income tax system does not completely explain the long-run history of the aggregate distribution. The Peruvian wealth tax system was continuously challenged by technocrats that denounced it as inconvenient for the national accumulation of capital. Ultimately, these critics promoted the deficient and dysfunctional design of the system along with the utilization of financial tools for wealth tax evasion. The Peruvian welfare system never reached an advanced level of development due to the flawed design of the institution, which aimed to provide only limited net social transfers to workers (Ferrero 1963b, Zegarra Russo 1966).

Similar to the income tax, Peru's wealth tax system was complex, consisting of two types of succession taxes and permitting widespread evasion throughout its existence. These taxes included: (i) the inheritance tax, imposed on the portion of the estate inherited by each heir, and (ii) the estate tax, applied to the net assets of the entire estate (Echecopar 1949, Blough 1958). The origins of the inheritance tax can be traced to the establishment of the system of departmental contributions (Law No. 178) in 1906, which introduced a tax on inheritances transferred to strangers at a rate of 4%, and to direct relatives at a rate of 2%. A significant flaw in this tax system was its flat rate, which did

not take into account the size or value of the estate, thereby undermining its potential progressivity.

The new tax on inheritance and gifts enacted in 1916 (Law No. 2227) represented an improvement in terms of progressivity. This new tax imposed a top marginal inheritance tax rate of 2% on estates larger than 50,000 Peruvian pounds (Lp.) or 500,000 soles oro (an equivalent of US\$130,061 in 1922) transferred from decedents to their children and spouses. Another form of succession tax, the estate tax, was introduced in response to the Great Depression and the high public debt resulting from Leguía's fiscal expansion in 1931 (Decree Law No. 7392). The latter tax was levied on the net value of any inherited personal estate and was intended to finance the operation of national universities. The tax schedule included a top marginal rate of 12% for estates exceeding 1 million soles oro (equivalent to approximately US\$278,782) for direct relatives and spouses, and 500,000 soles oro (equivalent to approximately US\$139,391) for unrelated heirs (see [Figure 12](#)). This new estate tax underwent further modifications.

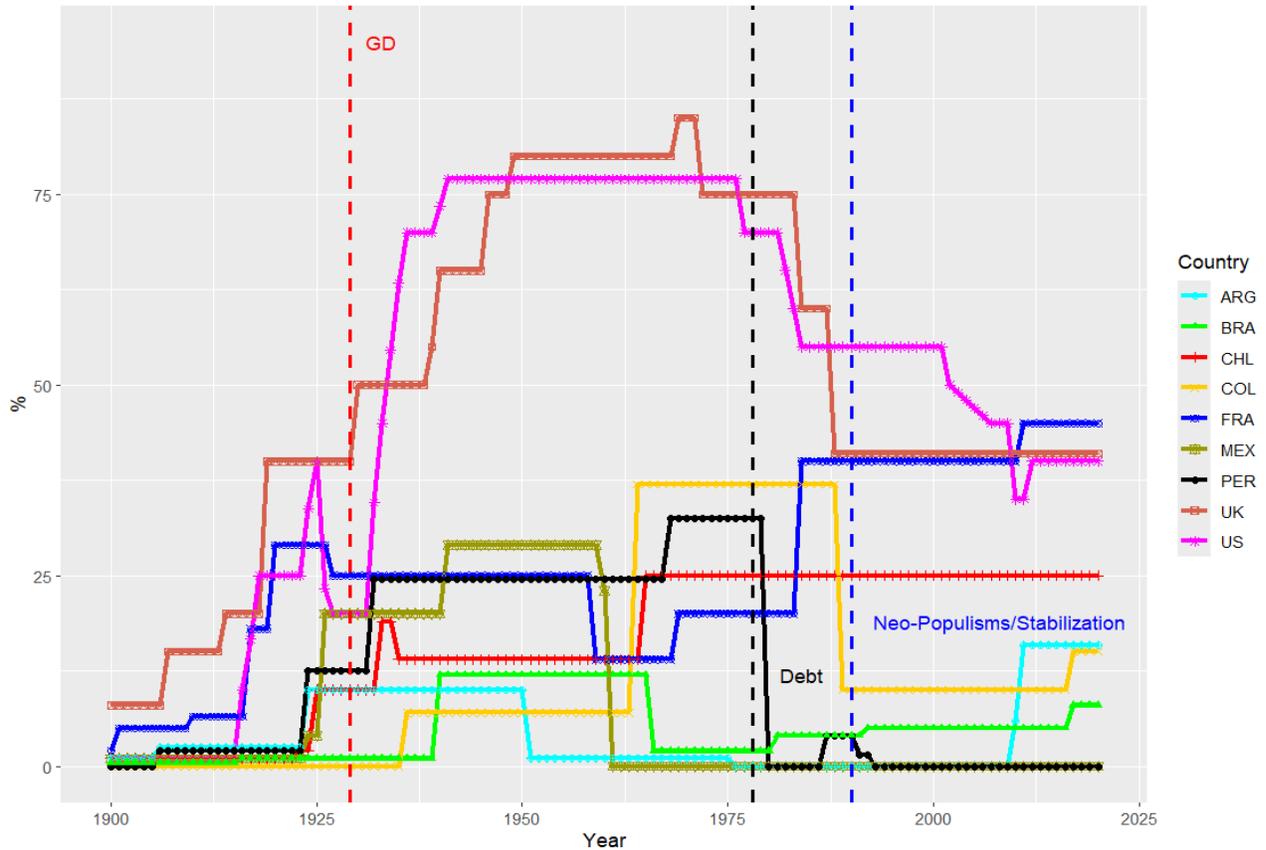
The schedule of the succession tax was not as high in Peru. A comparative analysis shows that it was only during Velasco's junta that the top marginal inheritance tax rate surpassed another country's rate, the case of France, which maintained a tax of 20% between 1969 and 1983 (see [Figure 12](#)). Additionally, Blough (1958) noted that bearer shares were a primary tool used by individuals to evade the succession tax. The government attempted to curb this practice without success.¹⁴ Ultimately, the 1968 tax reform prohibited the use of bearer shares altogether.

However, the succession tax did not survive past the 1970s. The tax was abolished in 1979 by Morales-Bermúdez's junta, which repealed both the inheritance and estate taxes (Decree Law No. 22719). Despite a peak in the share of the succession tax during this period, the contribution was eliminated due to subsequent political and ideological shifts. Under Velasco's junta, the wealth tax share on *NNI* decreased from 0.66% in 1970 to 0.63% in 1975. Paradoxically, the highest level of wealth tax collection occurred during Morales-Bermúdez's period, when the wealth tax share of *NNI* reached the level of 0.84% (see [Figure 10](#)).

Timid attempts to restore the succession tax appeared in the late 1980s, but the contribution was brought back under regressive terms. In 1987, Alan García introduced a new wealth tax on personal estates (Legislative Decree No. 451), specifying a top marginal tax rate of 4% that was reminiscent of the old regressive 1906 inheritance tax. However, this legislation was soon replaced by a new estate tax in late 1990 (Legislative Decree No. 620). This new tax was not progressive; it introduced a flat rate of 1% on the entire estate. The tax was scheduled to be collected starting in 1991, but a new law increased the rate to 1.5% and redefined it as a one-time extraordinary contribution

¹⁴In 1937, Law No. 2227 of 1916 was amended to include a fine for owning bearer shares (Law No. 8548), aiming to reduce their use. According to Basadre (1963), the Chamber of Commerce of Lima (CCL) actively denounced the so-called high costs imposed by the measure and asked for an amended law.

Figure 12: Top Marginal Inheritance Tax Rates of Lineal Heirs, 1900-2020.



Source: Jáuregui Encinas (1941); Carneiro (1975); Escalante (2020); Morgan and Carvalho Junior (2021); Piketty (2022); Carvalho Junior (2023); and Argentinian, Brazilian, Colombian, Chilean, Mexican, and Peruvian tax legislation (various years). Brazil (1900–1964; 1992–2015) reflects the highest state-level inheritance tax rate. For Argentina (1900–1923; 2010–2020), data correspond to the Province of Buenos Aires.

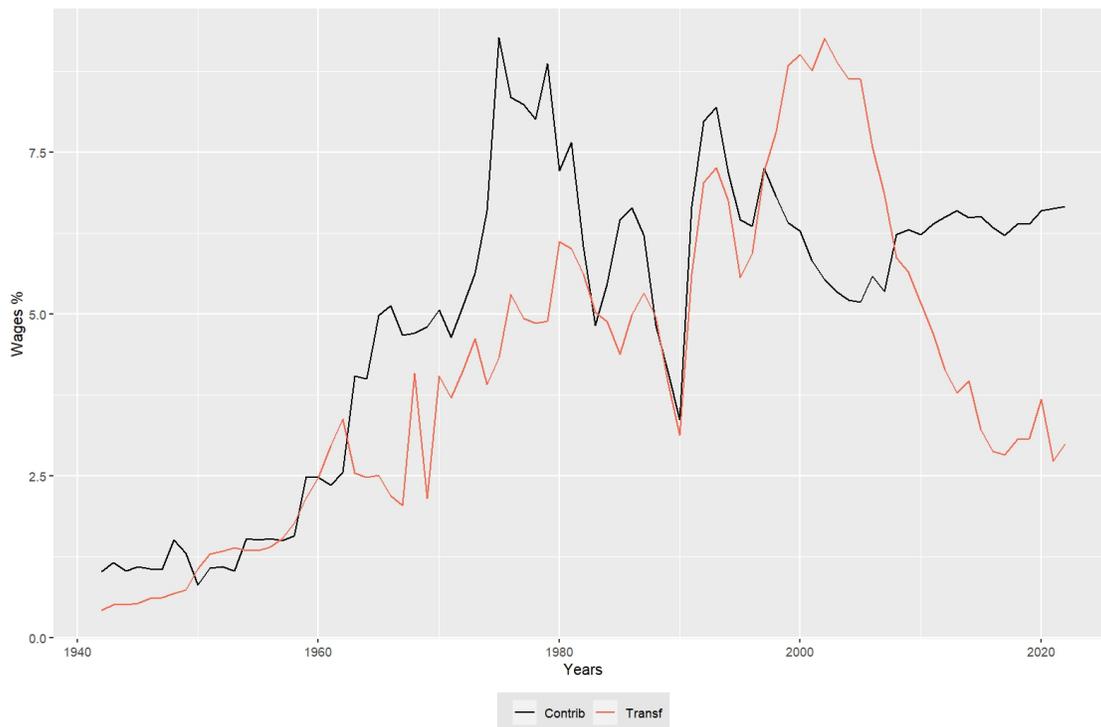
(Legislative Decree No. 643). In 1992, both Legislative Decrees No. 620 and No. 643 were replaced by Decree Law No. 25988, which reintroduced a tax on corporate equity similar to that of Velasco's regime. Ultimately, Fujimori's new income tax law in 1993 (Legislative Decree No. 774) eliminated both individual estate and corporate equity taxes from the Peruvian tax system.

As part of the struggles of the Peruvian working class and the efforts of some pro-labor technocrats, complementary redistribution measures were introduced with the creation of a social security system (Revista de Economía y Finanzas 1936). The Caja Nacional de Seguro Social (National Social Security Fund) was established in 1936 (Law No. 8433). This institution aimed to cover the risks of illness, maternity, disability, old age, and death for Peruvian laborers (EsSalud 2021). Twelve years later, social security was extended to cover white-collar employees under Odría's dictatorship (Decree Law No. 10902). Both measures faced opposition from the Chamber of Commerce of Lima (CCL), which advocated for 'more realistic' legislation that would benefit all workers equally (Basadre 1963). In the 1950s, Ferrero (1952) criticized the share of contributions on wages (45.89%), arguing that it imposed high costs on employers, potentially driving up inflation. Similar views were held by technocrats in the 1960s, who regarded both social contributions and pension systems as nothing more than production costs (Ferrero 1963b, Zegarra Russo 1966). Nevertheless, neither the laborers' nor the employees' social security systems managed to establish a modern social welfare system comparable to those in the United States or the United Kingdom.

The redistributive potential of both institutions was compromised by the government's reliance on indirect taxation for their financing. Although there was a brief shift with the introduction of laws establishing the National Social Security Fund and the new Security Fund for employees, which were complemented by legislation allowing both workers and employees to share in profits (Decree Law No. 10908), this measure faced opposition from the CCL, which criticized its contribution to inflation of labor costs (Ferrero 1963a). Ultimately, business associations, including the CCL, supported the modification of this measure through the creation of the National Health and Social Welfare Fund in 1951 (Law No. 11672). This reform introduced a degree of regressivity, as the new Fund was primarily financed through value-added and export taxes, rather than the profit-sharing provisions of the previous decree law from 1948 (Ferrero 1963a). The support for this measure was accompanied by the CCL's criticisms of the government's increases in average and minimum wages.

Technocrats and ideologues criticized the Peruvian system of social contributions and transfers, arguing that it imposed excessive costs on capitalists. Their assessments focused on the share of social contributions relative to the minimum wage. However, a more comprehensive analysis should target the share of social contributions relative to the reconstructed aggregate of wages. As shown in [Figure 13](#), this indicator is compared with the provision of services financed by these contributions, known as social transfers. Between 1942 and 1958, the period analyzed by economists such as

Figure 13: Social Contributions and Social Transfers over Wages, 1942-2022

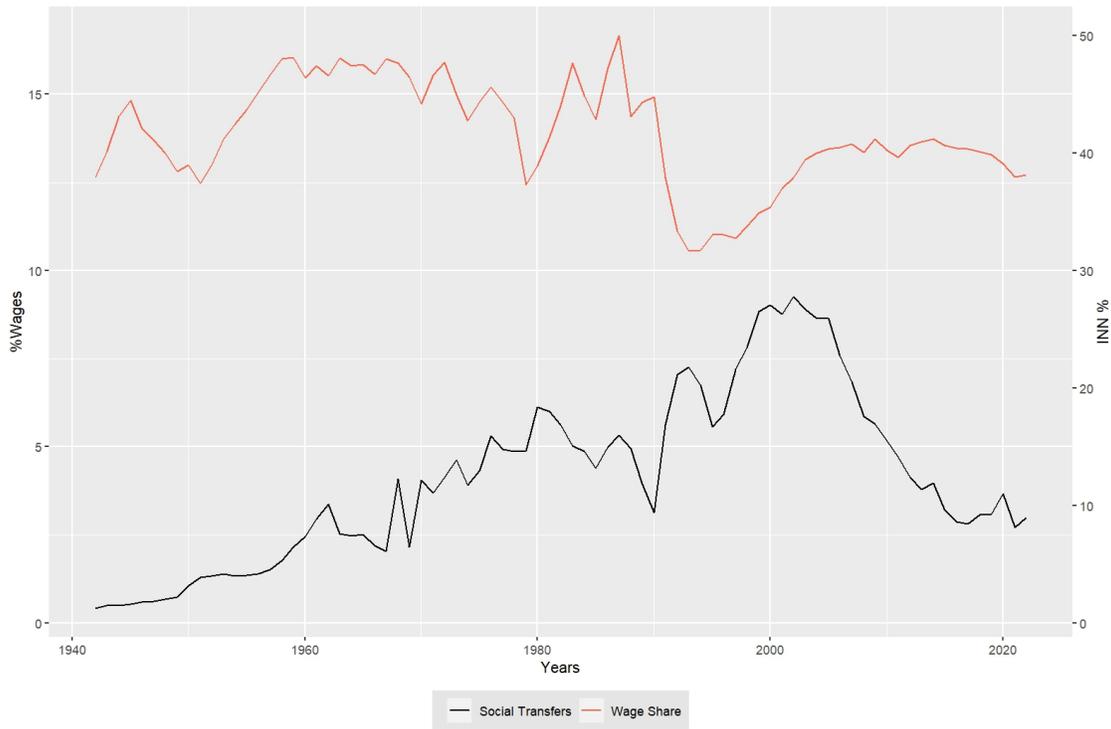


Ferrero (1952, 1963a), social contributions never exceeded 1.6% of aggregate wages. However, from 1960 onwards, contributions increased significantly, reaching 5.13% in 1966. The system only exceeded its financial sources (i.e., social contributions) on a few occasions, such as Odría's dictatorship, when social transfers surpassed contributions by 0.2% to 0.3% of total wages.

Between 1960 and 1970, reforms included the establishment of the employees' security fund as an autonomous branch (Law No. 13724) and the unification of the social security funds for laborers and employees into the Social Security of Peru in 1973 (Decree Law No. 20212). This integrated system provided both healthcare and retirement pensions under one framework. However, this integration was dismantled when Fujimori's administration enacted a major reform of the social security system in 1997, citing the state's inability to cover the healthcare and pensions demand (Law No. 26790). The reform introduced a market for retirement pensions, allowing private pension fund administrators (AFPs) to compete in unfair conditions with the public pension administrator (ONP). It also created a market for healthcare, enabling private healthcare providers to compete with public services. Since the 1997 reform, the public healthcare system has offered services with differentiated coverage based on the worker's status (e.g., self-employed or salaried).

After the 1980 crisis, both social contributions and transfers were significantly impacted by high inflation and economic recession. Social contributions fell to 4.83% of total wages by 1983 but

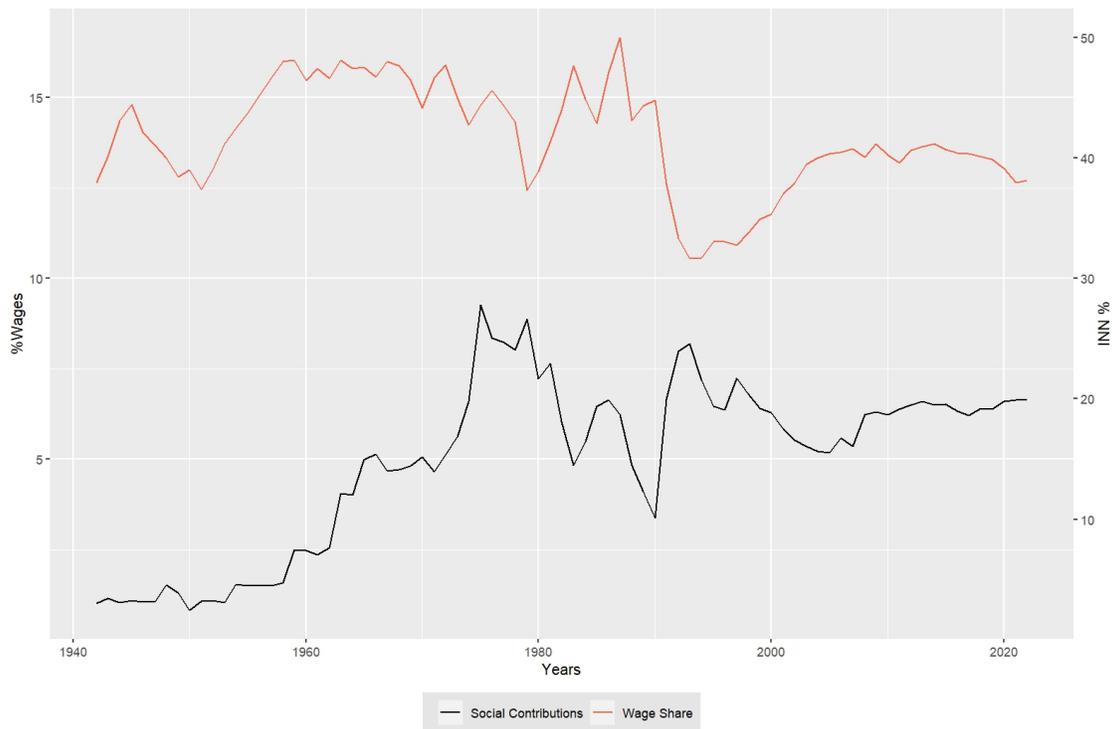
Figure 14: Social Transfers vs. Wage Share, 1942-2022



later increased to 6.22% by 1987. During this period, social transfers also rose, reaching 5.33% of total wages (see [Figure 13](#)). The hyperinflation crisis caused social contributions and transfers to nearly converge by 1990, with contributions at 3.36% and transfers at 3.13% of total wages. Subsequently, social contributions rebounded to a new peak of 8.20% of total wages in 1992, while social transfers also increased to 7.26% (see [Figure 14](#) and [Figure 15](#)). Unfortunately, this increase in contributions impacted less than 45% of salaried workers due to reductions in employment and the growing informalization of the economy.

Between 1992 and 2007, social transfers consistently exceeded contributions, with the largest gap occurring in 2002. Despite an increase in social contributions since 2006, they have not surpassed 6.66% of total wages (see [Figure 15](#)). In contrast, the share of social transfers declined sharply from a historical peak of 9.16% of total wages in 2002 to 3% in 2022, despite the benefits from the 2000s commodity boom and monetary stabilization (see [Figure 13](#)). These trends highlight a reversal in state benefits provided to the working class. As shown in [Figure 14](#), the rising and stable wage share of *NNI*, which still includes transfers from both private and public pension systems, contrasts with the decline in social transfers as a share of total wages. Additionally, while the wage share increased, the stagnation of contributions suggests that the social security system has been restrained to preserve profitability (see [Figure 15](#)).

Figure 15: Social Contributions vs. Wage Share, 1942-2022



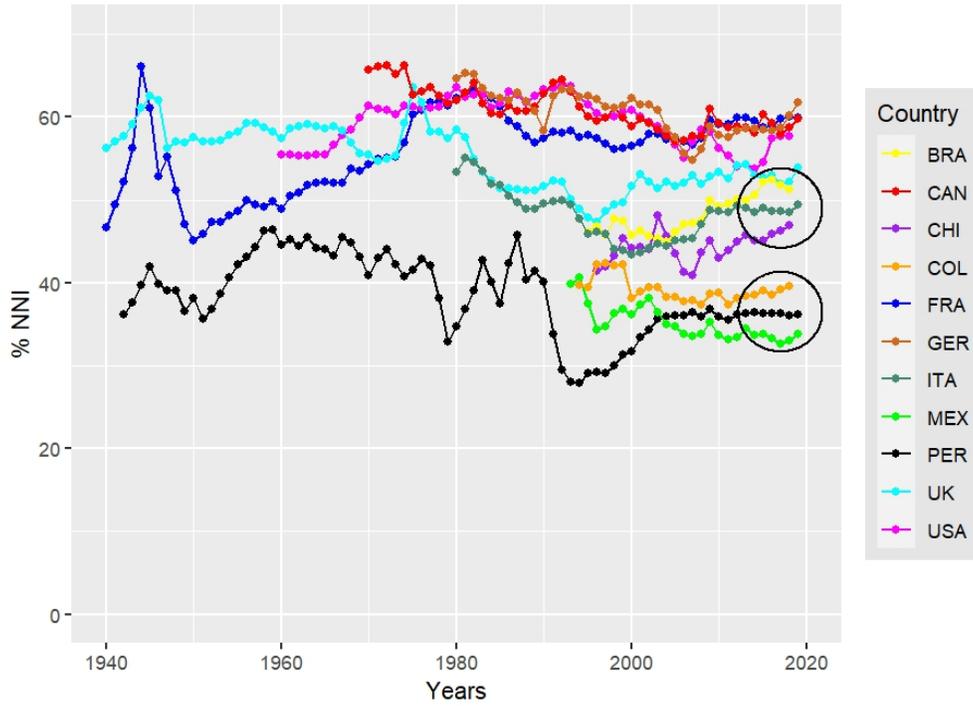
4 Accounting Decomposition and Aggregate Indicators

4.1 Wage Share Decomposition: Average Cost of Labor, Average Productivity, and Salaried Employment

In comparative perspective, the Peruvian wage share on *NNI* follows a similar pattern to its Latin American counterparts from the Pacific Alliance, Mexico and Colombia (see [Figure 16](#)). Based on data from WIL (2023), other South American economies like Brazil and Chile, which are respectively a key partner and a member of the OECD, have a higher wage share, closer to the levels of the UK. However, the wage share levels in Latin American countries are still below those of advanced economies like the US, France, and Canada, where the wage shares on *NNI* hovered around 50% to 60% between 2000 and 2019. In this context, it is useful to explore the domestic determinants in the evolution of the Peruvian wage share.

Therefore, I perform an accounting decomposition of the wage share that allows for the construction of an estimated series of the average labor cost (*alc*) or real wage ratio (Graña and Kennedy 2008). Based on an accounting identity, the total sum of wages can be defined as equal to the product of the *alc* and the total number of salaried employees ($L_{salaried}$). By incorporating the total employment ($L_{employed}$) and the effect of the GDP deflator, three components of the wage share in constant prices

Figure 16: Wage Shares in OECD and the Americas, 1940-2019



Source: Castillo (2015), WIL (2023)

can be derived. A crucial assumption in this decomposition is that the GDP deflator follows the evolution of the consumer price index, making it suitable for use as a deflator for the average wage.

In the decomposition, I utilized the wage share data along with the workforce and employment data estimated in subsection 2.2. In addition to the average labor cost, this decomposition process yields estimates of the average productivity of the employed workforce (q), and the rate of salaried employment (l_{sal}), which is the ratio between salaried and non-salaried workers. The final outcomes appear in equation 3:

$$\begin{aligned} \frac{W}{Y} &= \frac{w * L_{salaried}}{Y} \\ \frac{W}{Y} &= \frac{\frac{w}{deflator} * L_{salaried}}{\frac{GDP}{deflator}} * \frac{L_{employed}}{L_{employed}} \\ \frac{W}{Y} &= \frac{w}{deflator} * \frac{1}{\frac{GDP}{deflator * L_{employed}}} * \frac{L_{salaried}}{L_{employed}} \\ \frac{W}{Y} &= alc * \frac{1}{q} * l_{sal} \end{aligned} \quad (3)$$

In [Figure 17](#), both the average productivity of labor (q) and the average labor cost (alc) are measured in constant prices of 2007. Throughout most of the second half of the 20th century, the gap between alc and q illustrates that wage productivity decoupling has been a persistent characteristic of the Peruvian economy. The magnitude of this gap aligns with various periods of neoliberalization discussed in section 2.3 of this paper. For example, the wage-productivity decoupling increased during 1949-51, when q was approximately 1.25 times alc . Between 1956 and 1960, the decoupling further widened, with q rising from 1.12 to 1.3 times alc . After Velasco's coup, the value of q became almost the same as the alc in 1972, indicating a decline in the value extracted from the average worker. Following that year, the trend reversed. During the Second Phase of the military junta, under Morales-Bermúdez, the ratio of q to alc reached 1.7, with alc at an annual level of 12,519.20 nuevos soles of 2007.

The wage-productivity decoupling increased after the 1980s, coinciding with the post-crisis period. Before the 1983 crisis, q was decreasing at an annual average rate of 4.19%, while alc increased at an annual rate of 7.14%. After the 1983 crisis, q recovered and grew more than alc , which began to decline. The ratio between the two variables reached 1.28 in 1985. During the hyperinflation period, q fell from 18,814.33 nuevos soles of 2007 in 1987 to 12,348.03 nuevos soles of 2007 in 1991, an accumulated decrease of 34.37%. Meanwhile, alc experienced a larger decline of 49.33%, reaching 8,606.58 nuevos soles of 2007 in 1991 (see [Figure 17](#)). In 1992, q increased by 1.97%, but alc continued to fall at a rate of 10.99%. Therefore, in 1993 the q - alc gap reached the historical peak of 2. After 1994, alc recovered, accumulating an increase of more than 111% by 1999. This recovery went along with a 1.63% decline in q . Since 2002, the gap between q and alc has continuously increased to nearly 1.5. After the COVID-19 pandemic, the gap widened further, with q representing 1.68 times alc in 2022.

alc can be utilized as an index of the average labor income for the Peruvian economy. I show the evolution of average annual labor income (i.e., wage and salary) for different industries in [Figure 18](#). The series are based on different sources, making it difficult to compare the wage series levels over time. However, they can be compared with the alc series plotted in black. An interesting feature is that the average wages in finance (fin), mining (min), and utilities ($util$) (the supplying of electricity and water) have remained above the alc , while the average labor income of agriculture (agr) represented a low level, not exceeding 15,000 nuevos soles of 2007. In contrast, the average labor income for workers in construction ($cons$) and manufacturing (man) has lost relevance in the Peruvian economy since the 1980s. The highest levels of average labor income for manufacturing and the government (gov) were in the 1970s, concurrent with the Peruvian experiment on ISI and self-managed businesses. However, the governmental average labor income has maintained a high profile since the 1990s. Finally, the evolution of the average labor income in services ($serv$), which currently employs the majority of workers, has remained closer to the general evolution of alc .

Figure 17: Average Labor Cost vs. Productivity, 1942-2022

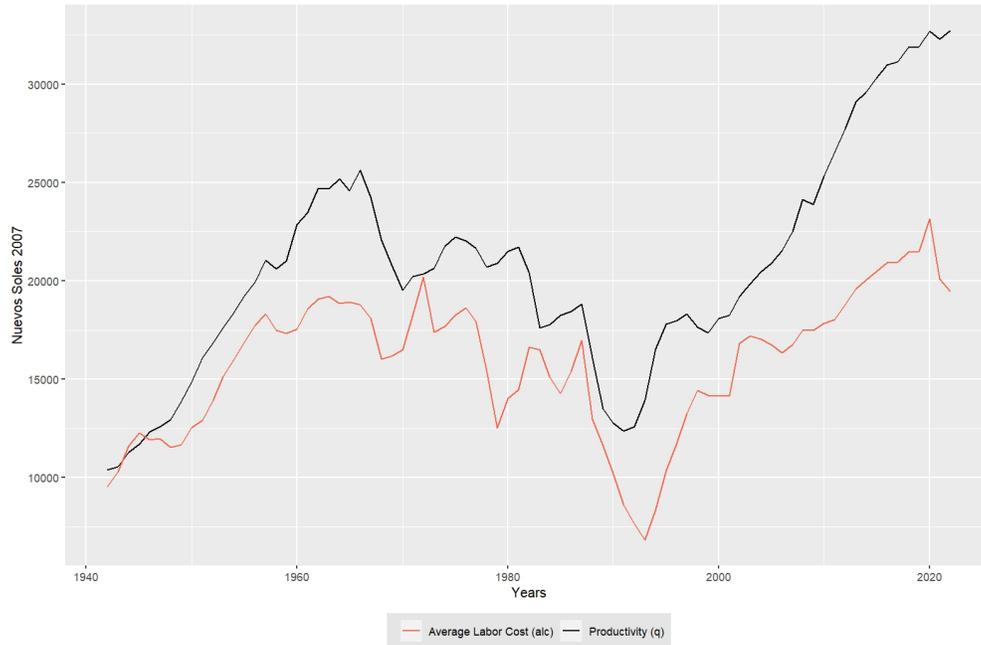
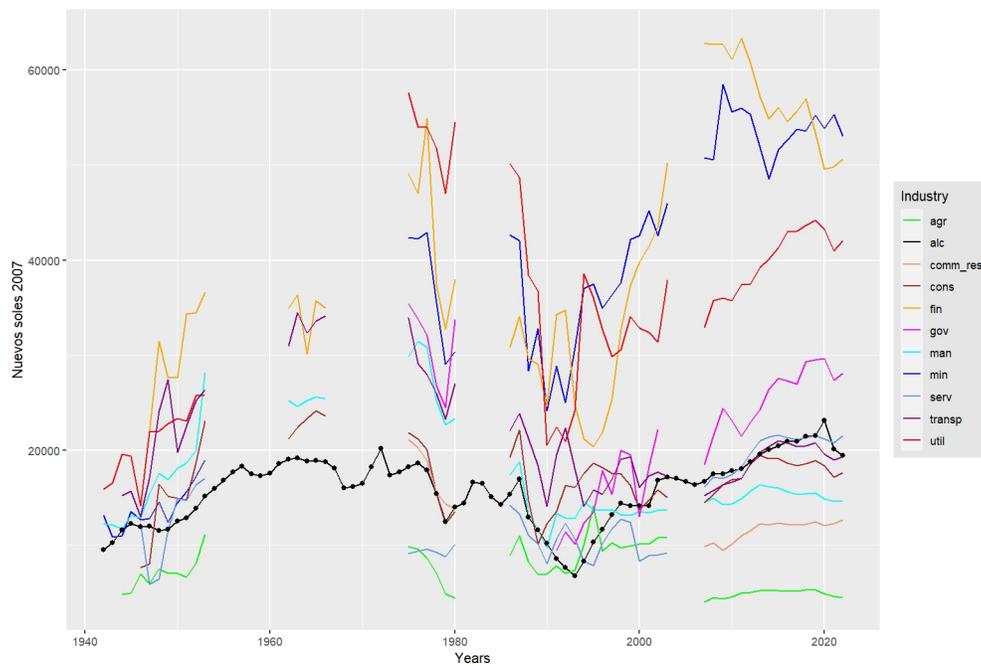
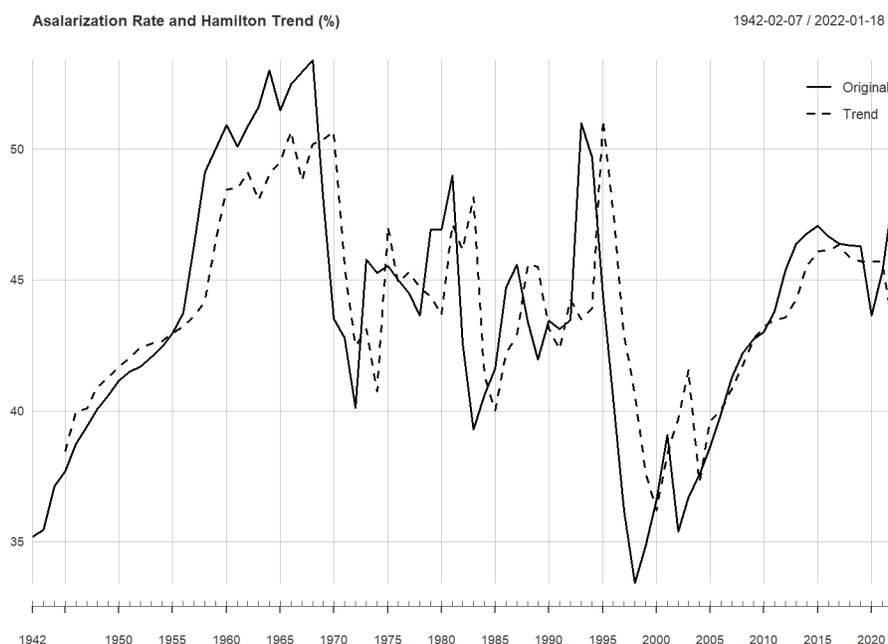


Figure 18: alc vs Average Labor Income per Industry, 1942-2022



Source: Ministerio de Hacienda y Comercio (1958, 1959, 1969), INE (1981, 1982), MTPE (2001, 2002, 2024), Nunura (2001)

Figure 19: Rate of Salaried Employment, 1942-2022



As shown in Figure 19, the asalarization rate (l_{sal}) provides insights into the effects of crisis episodes on the share of self-employed individuals in the economy. Whenever l_{sal} decreases, the share of self-employed individuals in total employment increases. The development process boosted l_{sal} from 35% in the 1940s to 53.41% in 1968, marking a historical peak in the reconstructed series. After 1968, l_{sal} decreased to 40.11% by 1972, coinciding with the impact of land reforms on the workforce structure. l_{sal} recovered to 49% in 1981. However, the 1980s crisis led to reduced employment, decreased salaried labor, and increased informality, with l_{sal} dropping to 43.45%. During the 1990s, economic recovery coincided with a rise in self-employment and persistent informality, reaching a historical minimum of 33.42% in 1998. Eventually, l_{sal} increased again during the sustained economic growth driven by the 2000s commodities boom.

4.2 The Rate of Profit and Its Decomposition: Exploitation Rate and Organic Composition of Capital

In order to understand the interaction between the evolution of accumulation and the profitability of capital in the Peruvian economy, I propose a reconstruction of the Peruvian rate of profit. In the spirit of Bhaduri and Marglin (1990), Duménil and Levy (1993), Foley and Michl (1999), Taylor (2004) and Maito (2014, 2018), I propose a simple accounting identity in equation 4 to study the rate of profit of the Peruvian economy. Such an aggregate indicator will be decomposed in two components: the rate of exploitation that was analyzed and mentioned in section subsection 2.2, and the organic

composition of capital (OCC) according to the classical conceptions. To avoid any concerns about the divergence between value and prices or any discussion about the Marx's transformation problem, I rely on the long-period method of Foley (2013). Such an assumption states that necessary labor time is proportional to paid labor time, and the mathematical value of this proportion is given by the so-called Monetary Expression of Labor Time (MELT): $MELT = \frac{P*Y}{L}$.

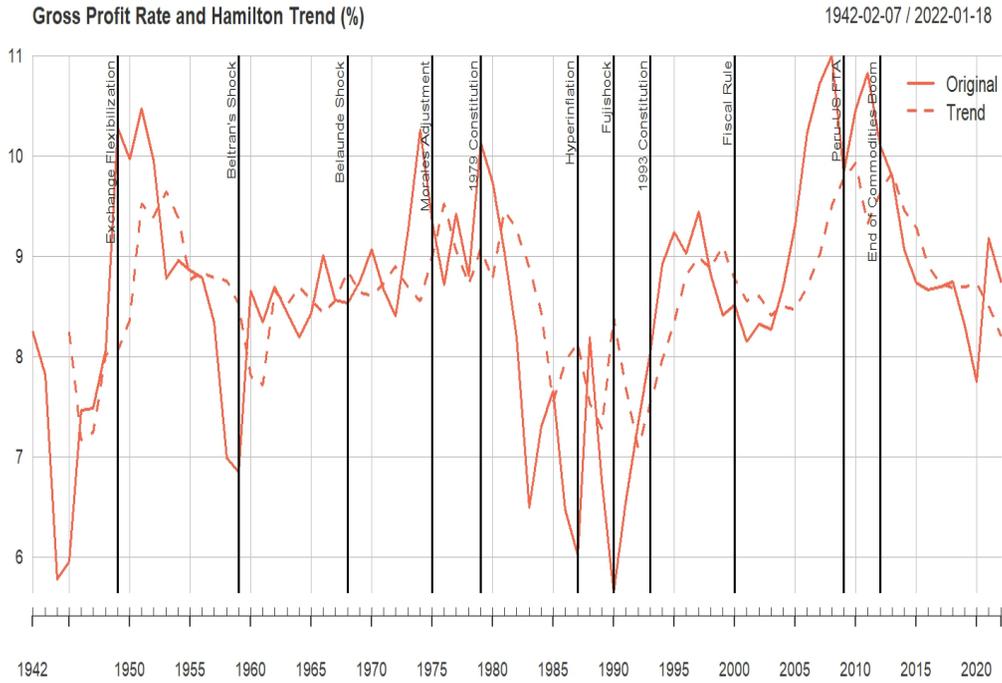
$$r = \frac{\Pi}{W + K} \quad (4)$$

In [equation 4](#), r is the rate of profit according to the classical political economy perspective, and Π is the aggregated sum of gross corporate profits. In this case, the denominator is the amount of capital, which, under the classical definition, requires both the value of fixed capital, represented by the value of the capital stock (K) reconstructed according to [Appendix](#), and the aggregate sum of wages (W), which represents the variable capital or the capital advanced to production (Harris 1983). Therefore, the indicator r in this part is not the same as the rate of return on assets/wealth estimated by Piketty (2014). This redefinition of the rate of profit better suits the situation of a capitalist economy, in which profitability clashes with endogenous accumulation constraints (Taylor 2014). The gross profit rate of the Peruvian economy appears in [Figure 20](#), along with its Hamilton trend and the chronology of neoliberalizations from [Table 1](#).

Except for the 1949 experiment of exchange rate liberalization, the gross rate of profit in Peru was boosted after the macroeconomic stabilization efforts (shocks) during the second half of the 20th century. There are four specific periods of lost profitability: the early 1940s, concurrent with the diminishing negative effects of the Great Depression and the postwar context; the entire decade of the 1950s, right after wages and production recovered; the first half of the 1980s, due to external and inflationary crises; and the post-2010 period, impacted by the end of the 2000s commodities boom. Episodes of increasing profitability coincided with the rise of inflation in the postwar 1940s, the amelioration of the hyperinflation crisis during Fujimori's presidency, and the 2000s commodities boom.

Although the profit share has surpassed the wage share in Peru since the 1990s, the Peruvian gross rate of profit has declined since the end of the 2000s commodities boom, highlighting the dependence of profitability on international prices. This declining pattern is similar to what is experienced in other Latin American economies and China. In [Figure 21](#), I plot the gross rates of profit for Peru and other economies using data on fixed capital (K) from Basu et al. (2022) and wages (W) and gross profits (Π) from the WIL (2023). The levels of the rates of profit differ, but the trends for Peru, Colombia, Brazil, and Mexico have shown a decline since 2010. Conversely, the Chinese rate of profit has been falling since the mid-1990s, when the indicator reached a level of 18.48%, a trend confirmed by Li and Li (2015). In European economies, the rates of profit have also

Figure 20: Gross Rate of Profit and Hamilton Trend, 1942-2022



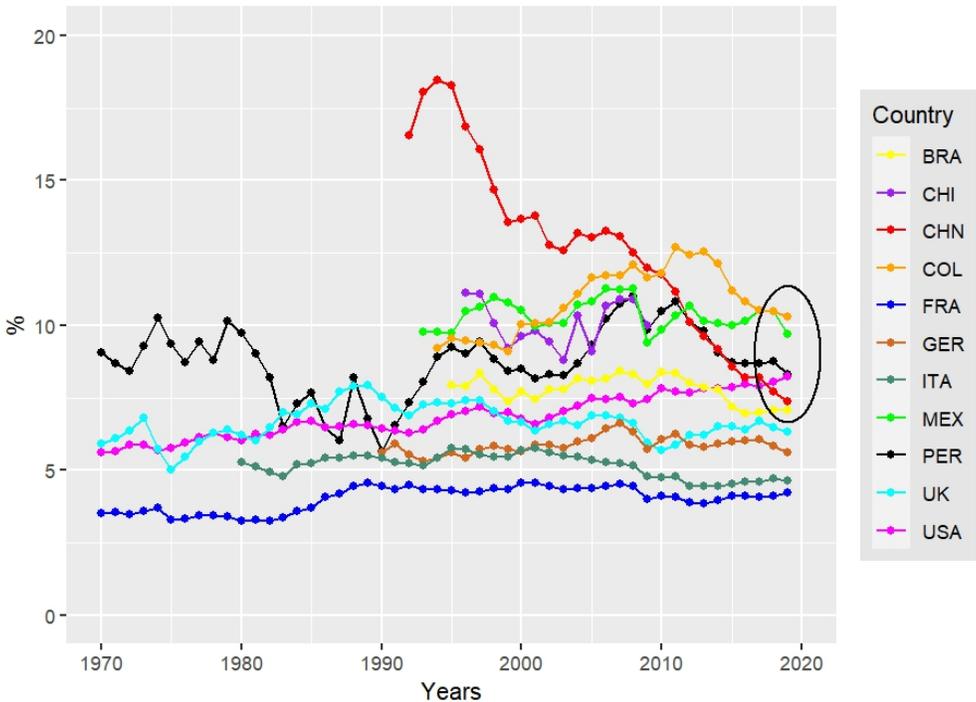
been declining, but in a more stable manner. Among advanced economies, the rate of profit in the US has risen since 1990, reaching a level of 8.23% in 2019.

A further analysis of the structural patterns behind this result concerns the decomposition of the average growth of the rate of profit (r) based on [equation 5](#). The exploitation rate ($expl_rate$ or $\frac{s}{v}$) is estimated as the ratio between the aggregate gross profit and the aggregate wages. Simultaneously, the organic composition of capital (OCC) is calculated as the ratio of the value of the capital stock (K) to the aggregate sum of wages (W), both expressed in constant 2007 prices. According to this, the evolution of the rate of profit is related to the growth of both the exploitation rate and the OCC . While the exploitation rate, a proxy of the coercive power of capital over labor, can grow by generating a deterioration of wages due to class struggle, the OCC behaves like a technical restriction on the rate of profit since an increase in capital stock can diminish profitability in the short run.

$$r = \frac{\frac{\Pi}{W}}{1 + \frac{K}{W}} = \frac{expl_rate}{1 + OCC} \quad (5)$$

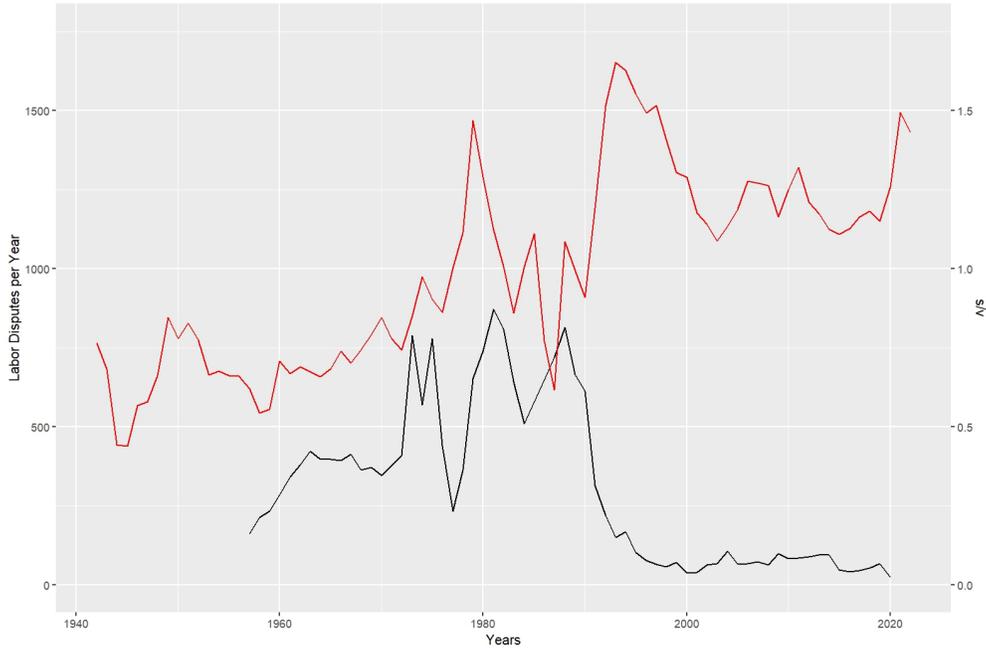
$$\dot{r} \approx expl_rate + \dot{OCC}$$

Figure 21: Rates of Profit in Advanced Economies and the Americas, 1970-2019



Source: Castillo (2015), Basu, et al. (2022), WIL (2023)

Figure 22: Exploitation Rate (right axis) as Proxy of the Decline in Workers' Power (left axis), 1957-2020



Source: ILO (2024)

Figure 23: Exploitation Rate (right axis) and Value Extraction (left axis), 1942-2022



In the decomposition analysis, *expl_rate* is interpreted as an aggregate proxy of the power of capital over labor, a political determinant of profitability. This is empirically supported by the data. In [Figure 22](#), *expl_rate* (the ratio of profits to wages) correlates negatively with the number of labor disputes per year, with a correlation coefficient of -0.41. This suggests a negative relationship between *expl_rate* and the strength of the workers' movement in Peru. Sulmont (1980) observed that rising labor unrest coincided with pro-labor concessions by Velasco's junta. However, during Morales-Bermúdez's Second Phase, repression followed a peak in labor disputes between 1974 and 1975. By the end of Morales-Bermúdez's junta, strikes increased due to disputes over the work flexibilization measures from 1978 (Decree Law 22126), with 43.6% of salaried employees involved in strikes that year. The post-hyperinflation context, worker impoverishment and further work flexibilization (leading to weakened unions) reduced yearly labor disputes from 667 in 1989 to 23 in 2020.

The explanatory power of *expl_rate* is also demonstrated by its relationship with value extraction, specifically the gap between salaried employment productivity (q) and the average labor cost (alc). In [Figure 23](#), both indicators follow a similar pattern, with an average positive correlation of approximately 0.61 for the entire period from 1942 to 2022 (see [Table 3](#)). This correlation increases during significant economic policy events discussed in [section 2.2](#). For instance, during key neoliberalization episodes such as Beltrán's austerity shock, Morales-Bermúdez's junta, and the social market economy episode in the early 1980s, the correlation between value extraction and *expl_rate* is notably higher, reaching 0.9539. Conversely, during Velasco's First Phase of the military junta, which weakened capitalist advantages, the correlation between *expl_rate* and the wage-productivity gap is lower at 0.2076, and not statistically significant. This analysis highlights how *expl_rate* is closely tied to periods of intensified labor coercion, high extraction of value, and neoliberal economic policies.

Table 3: *Exploitation Rate and Value Extraction in History, 1940-2012*

Economic Policy Events	Years	Correlation	p-value
Exchange Flexibilization	1948-1952	0.6911	0.1963
Beltrán's Shock	1959-1962	0.9539*	0.0461
Neoliberal Developmentalism	1963-1968	0.4748	0.3413
Velasco's First Phase	1968-1975	0.2076	0.6218
Morales-Bermúdez's Second Phase	1975-1979	0.9797**	0.0035
Social Market Economy	1979-1985	0.9079**	0.0047
Hyperinflation	1986-1990	0.3675	0.5428
Fujishock	1990-2000	0.8253**	0.0018

Continued on next page

Table 3 – continued from previous page

Economic Policy Events	Years	Correlation	p-value
Commodity Boom	2000-2012	0.6062*	0.0281
Neoliberal Hegemony	2012-2022	0.8049**	0.0028
Full Period	1942-2022	0.6130**	0.0000

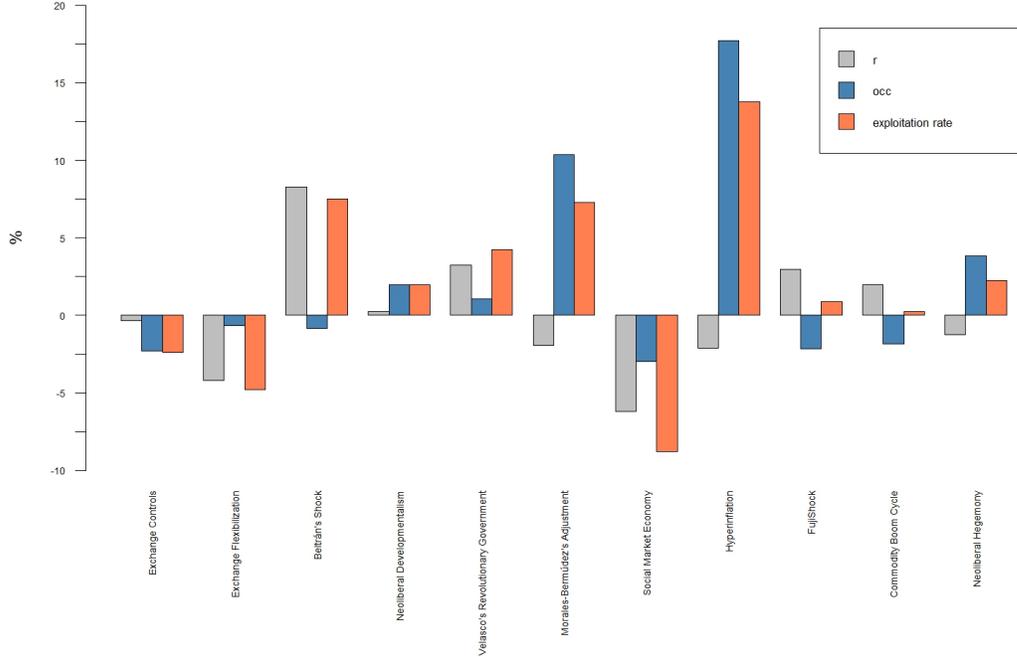
[*] Significant at 0.05; [**] significant at 0.01

In [Figure 24](#), the interaction of the two components $expl_rate$ and the OCC and the decomposition of the rate of profit are shown through the chronology in [Table 1](#) (Basu and Vasudevan 2013, Basu et al. 2022). The results indicate that the highest growth in the profit rate due to a neoliberalization shock occurred during Pedro Beltrán’s intervention in the early 1960s. This was primarily due to an increase in the exploitation rate, driven by repressive neoliberal policies. Similarly, Morales-Bermúdez’s adjustments represented a period of high exploitation, marked by a decreased wage share and a concurrent rise in OCC . The 1980s inflation crisis led to a decline in profitability, initially linked to a loss of exploitation power by capitalists. This was resolved during the hyperinflation crisis, where the soaring cost of living suppressed real wages, but dollarization and government subsidies to capitalists maintained relative profit stability. The post-Fujimori shock and the 2000s commodities boom allowed for a recovery in profitability and accumulation. Currently, there is a deterioration in the rate of profit due to a significant increase in OCC and constrained aggregate demand, resulting from a decline in W that worsened after the COVID pandemic (see [Figure 2](#)).

In light of the long-run history of the Peruvian economic structure, it is possible to study the terms of trade (tt) as a determinant of the gross profit rate (r). In the literature on structuralist economics, Latin American economies are characterized by a rate of profit closely tied to the evolution of the terms of trade, an indicator of the profitability of their predominant export industries (Prebisch 1950, Hausmann, Hwang, and Rodrik 2007, Ocampo 2017). In [Figure 25](#), I present the evolution of r and the terms of trade, measured as the ratio between the index of export prices and the index of import prices faced by the Peruvian economy (BCRP 2024). According to the figure, the correlation between r and the terms of trade index is 0.44, which is statistically significant. This indicates a meaningful relationship between the terms of trade and the profitability of Peru’s export-driven industries.

Based on the previous empirical findings, it can be hypothesized that in the Peruvian context, the exploitation rate, terms of trade, and organic composition of capital are key determinants of the rate of profit. To explore this interconnection, I rely on a previous template developed by Alexiou (2022). Following Weisskopf (1999), Alexiou applied a co-integration technique and error correction modelling (ECM) to assess theoretical propositions in the literature about the law of the tendency of the rate of profit to fall (LTRPF). Even though it is not the focus of this paper to

Figure 24: Rate of Profit, Organic Composition of Capital, and Exploitation Rate by Neoliberal Wave, Average Yearly Growth



research LTRPF, I propose an econometric model to evaluate the impact of political (*expl_rate*) and structural (*tt*, *OCC*) determinants on the rate of profit. Therefore, I apply the Autoregressive Distributed Lag (ARDL) approach to explore the interaction between the time series data for these three variables (Pesaran and Shin 1999, Pesaran et al. 2001). This technique allows us to find the non-autocorrelated relations between the rate of profit and its main determinants.

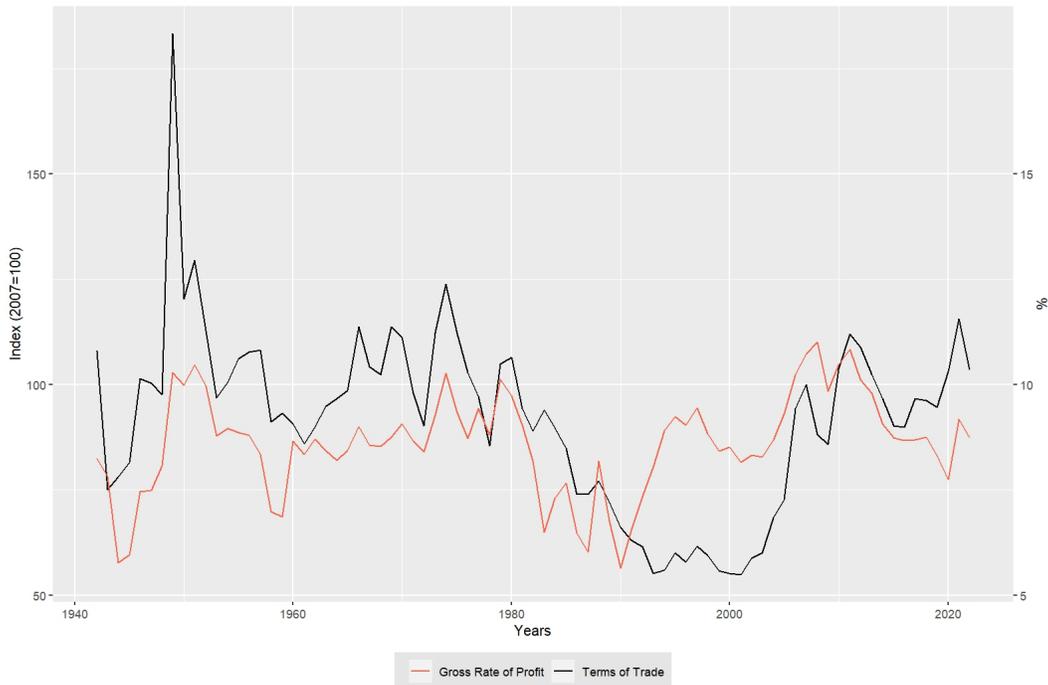
The basic econometric specification for this part appears in [equation 6](#) and represents a baseline model that can be estimated through OLS:

$$r_t = \beta_0 + \beta_1 expl_t + \beta_2 tt_t + \beta_3 OCC_t + \epsilon_t \quad (6)$$

However, to avoid problems of autocorrelation and heteroskedasticity, it is important to test for correlation, an operation that requires expressing [equation 6](#) according to the ARDL methodology:

$$\Delta r_t = \beta_0 + \sum_{i=1}^p \beta_{1,i} expl_{t-i} + \sum_{i=1}^p \beta_{2,i} tt_{t-i} + \sum_{i=1}^p \beta_{3,i} OCC_{t-i} + \phi_1 r_{t-1} + \phi_2 expl_{t-1} + \phi_3 tt_{t-1} + \phi_4 OCC_{t-1} + \epsilon_t \quad (7)$$

Figure 25: Gross Rate of Profit (right axis) and Terms of Trade (left axis), 1942-2022



Source: BCRP (2024)

In the ARDL methodology, the [equation 7](#) is called the error correction model (ECM). In this expression the values of $\beta_{1,i}$, $\beta_{2,i}$ and $\beta_{3,i}$ represent the short-run dynamics of the model. These coefficients indicate the immediate effects of the regressors on the rate of profit. Conversely, the values ϕ_1 , ϕ_2 , ϕ_3 , and ϕ_4 reflect long-run dynamics, representing the equilibrium relationship to which any perturbations in the regressors will eventually return. The number of lags for the ECM, denoted by p , will be selected based on the Akaike information criterion (AIC).

The first step in this methodology is to determine the degree of integration, which requires checking for stationarity. I use the R-package *urca* to perform unit root tests (Pfaff, Zivot and Stigler 2024). In [Table 4](#), I present the results of the stationarity tests performed on the four variables included in [equation 7](#) and their differences. According to these results, the integration order of the ARDL model should be $I(1)$, indicating that most of the variables in the model do not have a unit root after being differenced.

Table 4: Unit Root Tests

	Augmented DF	Phillips-Perron	Dickey-Fuller GLS	KPSS
r_t	-0.2786	-21.447*	-3.1417*	0.2079
Δr_t	-8.3621**	-73.179***	-3.0272**	0.032
$expl_t$	0.018	-20.617*	-1.3243	1.5862*
$\Delta expl_t$	-8.3991**	-61.755**	-2.3574*	0.0444
OCC_t	0.1365	-9.2784	-0.8397	1.3929*
ΔOCC_t	-6.6229**	-43.565**	-2.8138*	0.0783
tt_t	-0.2433	-20.631*	-1.6833	0.5686*
Δtt_t	-8.272**	-97.894***	-0.9515	0.0679

[*] p-value<0.05; [**]p-value<0.01; [***]p-value<0.001. Augmented Dickey-Fuller, PP, and DF-GLS have null hypothesis of a unit-root, while KPSS has a null of stationarity.

Following the unit root tests, I show the outcomes of both the estimated ECM from [equation 7](#) and the long-run relationship in [equation 6](#). In order to estimate these equations according to the ARDL method, I utilize the R-package *dynamac* prepared by Jordan and Phillips (2022). The outcomes of the ARDL estimation appear in [Table 5](#). In this case, the highest p or number of lags selected for the final estimated specification is 3.

In [Table 6](#) we can see the values of the coefficients that are associated with the long-run relationship between the dependent variable and the three regressors. The signs of the coefficients follow the theoretical relations explained before. While the exploitation rate and the terms of trade have a positive impact on profitability, the organic composition of capital makes it diminish. Based on the suggestions of the authors and Pesaran et al. (2001), I perform an autocorrelation test, which shows that the estimated ECM equation does not fail to reject the null hypothesis of serial correlation, with a statistic of 0.182 and a p-value of 0.67. The outcomes of the autocorrelation and normalization test also appear in [Table 6](#). In the specification that is shown, I solved the autocorrelation problem by adding differentiated lags for the dependent and independent variables (Phillips 2018).

Table 5: Error Correction Model, ARDL (3,2,2,1)

Variable	Coefficient	Standard Error
constant	0.03068***	0.0069
r_{t-1}	-0.4036***	0.0940
Δr_{t-1}	0.2572*	0.1226
Δr_{t-2}	-0.03021	0.0559
Continued on next page		

Table 5 – continued from previous page

Variable	Coefficient	Standard Error
Δr_{t-3}	0.05153	0.030
$\Delta explot_t$	0.07595***	0.0028
Δtt_t	0.00006***	0.000019
Δocc_t	-0.005553***	0.0004
$explot_{t-1}$	0.0299***	0.007626
tt_{t-1}	0.00001137	0.000021
occ_{t-1}	-0.002522***	0.0006
$\Delta explot_{t-1}$	-0.01856	0.0098
$\Delta explot_{t-2}$	0.003306	0.0035
Δtt_{t-1}	0.00001413	0.000024
Δtt_{t-2}	0.00001299	0.000019
Δocc_{t-1}	0.0013	0.0008
R^2 adjusted		0.942
F-statistic		430

[*] p-value<0.05; [**] p-value<0.01; [***]p-value<0.001

Table 6: Long-Run Equation Estimates

Variable	Coefficient	Standard Error
constant	0.00658***	0.0027
$explot_t$	0.07706***	0.0025
tt_t	0.00008***	0.00002
occ_t	-0.00606***	0.0003
Serial Correlation	0.182	
Normality	0.961*	
R^2 adjusted	0.9415	

[*] p-value<0.05; [**] p-value<0.01; [***]p-value<0.001

Finally, to test for the presence of the co-integration relationship between r and its explanatory variables, I perform an ARDL-bounds test proposed by Pesaran et. al. (2001). The structure of the test relies on two specific hypotheses. Based on [equation 7](#), the bounds test uses a Wald or F-test on the following restriction:

$$H_0 : \phi_1 = \phi_2 = \phi_3 = \dots = 0$$

Rejecting this null hypothesis indicates that there is a cointegrating relationship between the series

under analysis.

In addition, the second null hypothesis analyzed in the bounds test is a one-sided t-test, which is used to test the null hypothesis that the coefficient on the lagged dependent variable (in levels) is equal to zero. If the results of the test suggest that the null hypothesis may be rejected, the alternative hypothesis $H_a : \phi_1 < 0$ is not rejected and the co-integration relationship is present.

$$H_0 : \phi_1 = 0$$

The results of the bounds test appear in [Table 7](#). According to the test, the bounds test rejects the hypothesis of joint statistical significance for the regression coefficients associated with the lags of the endogenous and exogenous variables. Furthermore, the test suggests that it is possible to not reject the null hypothesis of the t-test for the presence of co-integration. Given the value of the statistics and the fact that the specification has the order of integration of 1, this implies that the null hypothesis is rejected if the estimated statistics surpass the values in column $I(1)$ of the table. The F-test suggests co-integration with a statistical significance of 5%. Similarly, the t-test suggests similar results due to its value.

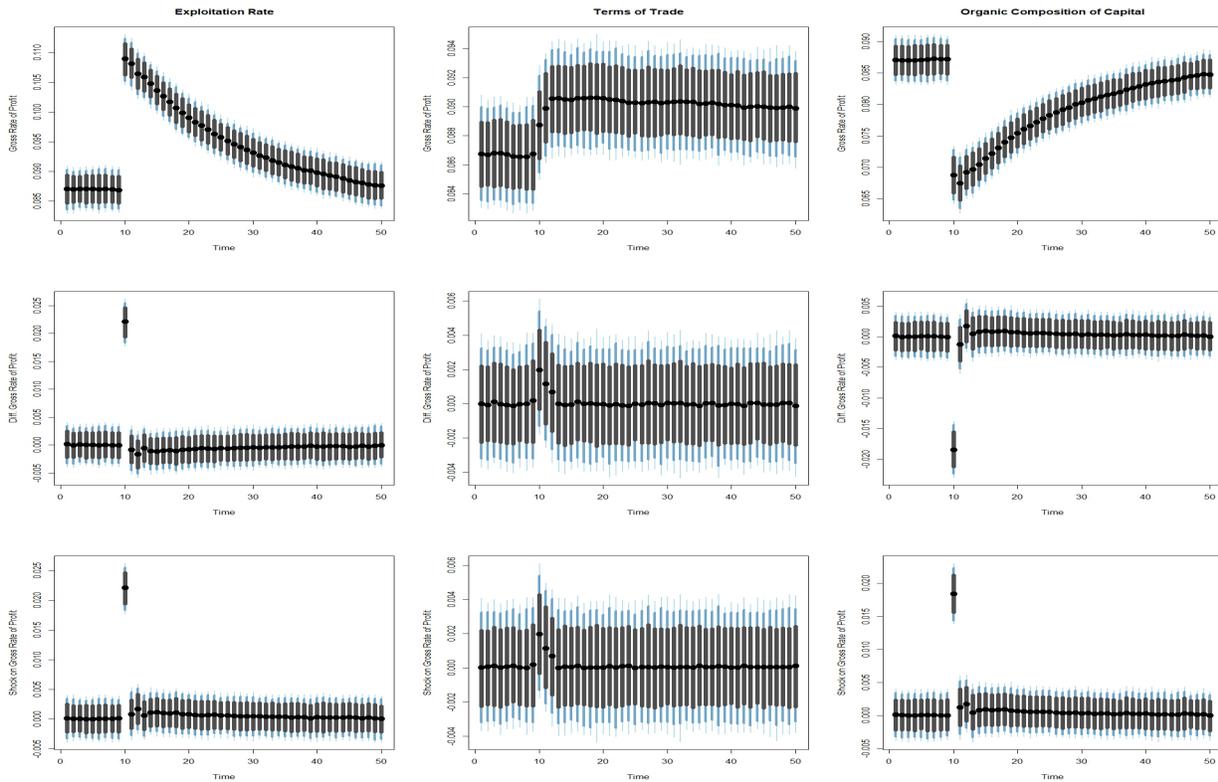
Table 7: *Bounds test for cointegration*

Test Statistic	Value	Signif.	I(0)	I(1)
$F_{\text{statistic}}$	5.439	10%	2.82	3.88
k	3	5%	3.36	4.51
		1%	4.57	5.96
$t_{\text{statistic}}$	-4.293	10%	-2.57	-3.46
k	3	5%	-2.86	-3.78
		1%	-3.43	-4.37

After evaluating the presence of co-integration, it is possible to simulate shocks of the explanatory variables on the rate of profit (r). To achieve this, I use the simulation option from the ARDL package *dynamac*. The function is used to simulate the impacts of the three determinants of profitability ($expl_t$, occ_t and tt_t) on r . The shocks simulated in [Figure 26](#) have a size of one standard deviation for each explanatory variable. The effects that these perturbations have on r are consistent with the theory and the previous empirical results analyzed in this section.

For instance, in the first column of [Figure 26](#), it is possible to see how a simulated shock of one standard deviation in the exploitation rate (0.3074 units) can generate an increase of around 2.23 percentage points in the rate of profit. After this initial shock, the rate of profit starts to diminish, reaching a level of 8.77% in period 50, which is 0.1 percentage points higher than the initial level.

Figure 26: Simulated Shocks: Exploitation Rate, Terms of Trade, and Organic Composition of Capital



It is also possible to observe the effects of the terms of trade on r . Even though the direction is positive, the lack of statistical significance in the estimated coefficient produces larger confidence intervals. After a shock of one standard deviation in the terms of trade (21.398 units), the rate of profit appears to experience an increase of almost 0.2 percentage points. The impulse response function for the terms of trade effect shows that the initial shock would produce a permanent change in the rate of profit, from 8.67% to a new level of around 9.1%, a gain of 0.4 percentage points at the final level. Finally, an initial shock in the organic composition of capital would produce a significant decrease of almost two percentage points in the rate of profit, from 8.67% to 6.84%. Although the rate of profit would recover quickly, the final level would be 0.2 percentage points below its initial level.

5 Conclusion

The goal of this paper was to narrate the distributive history of Peruvian capitalism since 1942. The primary objective was to understand the effects of economic policy-making processes and of the subsequent political environment on the determination of macroeconomic distributive patterns and, ultimately, on the evolution of capitalist accumulation in Peru. I demonstrated that the relationship

between profits and wages is influenced by more than just structural economic processes. A crucial starting point for this analysis was the evidence of distributive conflicts stemming from the competing claims of various actors within the Peruvian political economy. To shed light on this aspect, this chapter presented a dual approach—both quantitative and qualitative—to provide evidence about the macroeconomic dynamics and the economic policy events influencing the distributive performance and accumulation pattern of the Peruvian political economy. In a nutshell, the distributive history of Peru and its interaction with its political history show that politics matter in producing structural outcomes in the political economy.

It is well known that more accurate distributive analyses require micro-data which allow for more flexibility in the treatment of information. Despite this, in this paper, I aimed to explore economic dynamics using reconstructed macroeconomic data. The contribution of this exercise lies in providing the first set of DINA macroaggregates and factor shares covering more than 30 years of Peruvian history, facilitating long-run historical analysis. Additionally, this data may be useful for further research on the Peruvian and Latin American political economies. In this paper, the reconstructed data makes it possible to evaluate how the Peruvian factor income shares have followed the structural patterns of global capitalism, specifically the long-term decline of the wage share and the simultaneous increase of the profit share. Furthermore, I introduced the treatment of new macroeconomic distributive indicators like the average labor cost (*alc*), the rate of profit (*r*), and the exploitation rate (*expl_rate*) as indicators of the political economy's state.

On the other hand, this document attempts to bridge the gap between the heterodox tradition of political economy and the empirical approach proposed by Piketty et al. To achieve this objective, the paper relied on intellectual history, institutional history, and data reconstruction. This combination of methods demonstrates the possibility of merging the traditions of historical political economy with the institutional perspectives in heterodox economics. This approach effectively integrates serial history—reconstructing data and analyzing it within economic history—with the qualitative aspects of political and institutional analysis. Mixed methods make it possible to gain a comprehensive understanding of the dynamics shaping the Peruvian political economy and its distributive outcomes over time. Ultimately, the integration of legal and intellectual history highlights the efforts of technocrats and business associations to restore profitability following the country's economic crises. These efforts are encapsulated in the concept of neoliberalization, which encompassed measures such as job flexibilization, labor coercion, and fiscal regressivity. These policies aimed to expand the operational space for proponents of the free market and representatives of private initiative (i.e., capitalists).

The study of both Peruvian taxation and the social welfare system in terms of the components of the *NNI* highlights the prevalence of regressive policies in Peru and similar peripheral capitalist

economies since the end of the Great Depression. Such a regressivity was actively constructed during economic stabilization processes, which involved debates about economic policies. Paradoxically, the crises in Peru provided opportunities for technocratic and capitalist elites to gain control of policy-making during stabilization periods, instead of workers' coalitions or trade unions. This ultimately allowed capital to reshape redistributive policies to favor their profitability. This research demonstrates that in Peru, business associations have been active in shaping these policies since the 1930s. Consequently, the country has never reached top marginal taxes higher than 75% for income tax and 25% for wealth tax during the entire second half of the 20th century. Additionally, the history of the welfare system in Peru demonstrates how the construction of social security legislation was blocked by significant business associations, which contended that the system's costs were too high. Nevertheless, the aggregates of social contributions and social transfers, both indicators representing the performance of the social security system, have never represented more than 10% of the total sum of wages.

In addition, this combination of methods provides an interesting approach to address the effects of power on income distribution, a variable not necessarily conditioned by the structural evolution of the economy. The question of power in distributive relations can be explored through constructing indicators like the exploitation rate or the index of extracted value. As shown in the last part of the chapter, the exploitation rate has risen since the late 1980s, which is evidence of the distributive reversal in favor of capital. Strikingly, the correlation between this indicator and the number of yearly strikes is clearly negative for the entire period under study, while its correlation with the index of extracted value is high and positive (around 0.6). This latter correlation is also higher during specific episodes of neoliberalization, such as Beltrán's austerity shock and the Morales-Bermúdez junta, which combined an emphasis on applying stabilization policies with the increased repression of labor.

Finally, the decomposition exercises provide a set of indicators for assessing political economy dynamics within capitalism. For the Peruvian economy, the results of the wage share decomposition reveals a growing gap between labor productivity and average real wages for salaried workers since the 1970s. This supports the wage-productivity decoupling hypothesis, which has been previously explored by institutional and political economists in relation to global capitalism. In recent decades, the positive evolution of this indicator has contributed to increases in the exploitation rate, partially explaining the reduction in the labor income share during the 2000s due to rising profitability.

In this context, the section on the decomposition of the rate of profit offers statistical evidence that the terms of trade, the exploitation rate, and the organic composition of capital are significant determinants of profitability, reflecting both political and structural conditions. Co-integration estimates show that the exploitation rate has a long-run positive effect of nearly 0.1 percentage

points on profit following a shock of one standard deviation, while the terms of trade display an increased effect of 0.5 percentage points. These findings underscore the importance of international prices in determining profits in the Peruvian economy.

References

- [1] Acemoglu, Daron and Simon Johnson. 2023. *Power and Progress: Our Thousand-Year Struggle Over Technology and Prosperity*. New York: PublicAffairs.
- [2] Alarco, Germán. 1984. “Alternativas de reactivación económica: algunas notas críticas”. In: Alarco, Germán (Ed.) *¿Una nueva política económica?*. Lima: Centro de Investigación de la Universidad del Pacífico, pp. 23-40.
- [3] Alarco, Germán, and César Castillo. 2018. “Functional Distribution of Income and Growth Regime in Peru, 1942-2013”. In: *CEPAL Review*, num. 125, pp. 211-27.
- [4] Alarco, Germán, César Castillo, and Favio Leiva. 2019. *Riqueza y desigualdad en el Perú. Visión panorámica*. Lima: Oxfam.
- [5] Alexiou, Constantinos. 2022. “Evaluating the Falling Rate of Profit in the Context of the UK Economy”. In: *Structural Change and Economic Dynamics*, vol. 61, pp. 84-94.
- [6] Alvaredo, Facundo. 2010. “The Rich in Argentina over the Twentieth Century 1932-2004”, In: Atkinson, Anthony and Thomas Piketty (ed.) *Top Incomes over the Twentieth Century: A Global Perspective*,. Oxford: Oxford University Press, pp. 253-98.
- [7] Alvaredo, Facundo, Mauricio De Rosa, Ignacio Flores, and Marc Morgan. 2022. *The Inequality (or the Growth) We Measure: Data Gaps and the Distribution of Incomes*. Working Papers Series, num. 49, Stone Center on Socio-Economic Inequality.
- [8] Atkinson, Antony. 2009. “Factor shares: the principal problem of political economy?”. In: *Oxford Review of Economic Policy*, vol. 25, num. 1, pp. 3-16.
- [9] Baccaro, Lucio and Jonas Pontusson. 2016. “Rethinking Comparative Political Economy: The Growth Model Perspective.” In: *Politics & Society*, vol. 44, num. 2, pp. 175-207.
- [10] Barcelos da Nóbrega, Cristóvão. 2025. *100 anos do Imposto de Renda no Brasil 1922 -2022: um enfoque da pessoa física*. Brasilia: Phabrica.
- [11] Barreto, Emilio. 1945. “Renta nacional”. In: *Boletín mensual del BCRP*, August, pp. 5-7.
- [12] Basadre, Jorge. 1963. “La Cámara de Comercio de Lima desde su fundación hasta 1938.” In: *Historia de la Cámara de Comercio de Lima*. Lima: Cámara de Comercio de Lima, pp. 3-212.

- [13] Basu, Deepankar and Rama Vasudevan. 2013. “Technology, Distribution and the Rate of Profit in the U.S. Economy: Understanding the Current Crisis”. In: *Cambridge journal of Economics*, vol. 37, num. 1, pp. 57–89.
- [14] Basu, Deepankar, Julio Huato, Jesús Lara Jauregui and Evan Wasner. 2022. “World Profit Rates, 1960-2019.” In: *Review of Political Economy*, <https://doi.org/10.1080/09538259.2022.2140007>.
- [15] Bauluz, L., Pierre Brassac, Jonas Dietrich, Clara Martínez-Toledano, Gastón Nievas, Moritz Odersky, Thomas Piketty, Alice Sodano, and Anmol Somanchi. 2025. *Global Wealth, Accumulation and Ownership Patterns, 1800-2025*. Working Papers Series, num. 2025/22, World Inequality Lab.
- [16] BCRP. 1997. *La misión Kemmerer en el Perú. Informes y propuestas*. Lima: Banco Central de Reserva de Perú.
- [17] BCRP. 1999. *El Banco Central: Su Historia y la Economía del Perú, 1821-1992*, vol. 1. Lima: Banco Central de Reserva de Perú.
- [18] BCRP. 2024. *Series estadísticas*. <https://estadisticas.bcrp.gob.pe/estadisticas/series/>.
- [19] Behringer, Jan, and Till van Treeck. 2022. “Varieties of capitalism and growth regimes: the role of income distribution.” In: *Socio-Economic Review*, vol. 20, num. 3, pp. 1249-1286.
- [20] Bengtsson, Erik and Daniel Waldenström. 2018. “Capital Shares and Income Inequality: Evidence from the Long Run”. In: *The Journal of Economic History*, vol. 78, num. 3, pp. 712-743.
- [21] Bhaduri, Amit and Donald J. Harris. 1986. “The Complex Dynamics of the Simple Ricardian System”. In: *Quarterly Journal of Economics*, vol. 102, num. 4, pp. 893-902.
- [22] Bhaduri, Amit and Stephen Marglin. 1990. “Unemployment and the Real Wage: the Economic Basis for Contesting Political Ideologies”. In: *Cambridge journal of Economics*, vol. 14, num. 4, pp. 375–393.
- [23] Biehl, Andrés, José Tomás Labarca, and Jorge Atria. 2025. “Class-Based Taxation: The Fiscal Paternalism of the Chilean Income Tax?.” In: *Revista de Historia Económica / Journal of Iberian and Latin American Economic History* num. 43, pp. 191-216.
- [24] Blanchet, Thomas, Lucas Chancel, Ignacio Flores, Marc Morgan et. al. 2024. *Distributional National Accounts Guidelines. Methods and Concepts Used in the World Inequality Database*. Paris: World Inequality Lab.

- [25] Blanco, Miguel Artola, Luis Bauluz, and Clara Martínez-Toledano. “Wealth in Spain 1900–2017 A Country of Two Lands.” In: *The Economic Journal*, vol. 131, num. 633, pp. 129-155.
- [26] Blecker, Robert and Mark Setterfield. 2019. *Heterodox Macroeconomics: Models of Demand, Distribution and Growth*. Cheltenham: Edward Elgar Publishing.
- [27] Blough, Roy. 1958. *Report on Tax Policy in Peru*. Mimeo.
- [28] Boyer, Robert and Yves Saillard. 2002. *Regulation Theory: The State of the Art*. Routledge, London.
- [29] Caballero, José María and Elena Álvarez. 1980. *Aspectos cuantitativos de la reforma agraria (1969-1979)*. Lima: Instituto de Estudios Peruanos.
- [30] Capuñay, Carlos. 1969. *Los impuestos a la renta en el Perú (Ley 17044 - D.S.287-68-HC)*. Lima: Universidad Nacional Mayor de San Marcos - Instituto de Investigaciones Económicas.
- [31] Carneiro, José A. 1975. *Régimen legal del impuesto a las sucesiones: Compendio concordado y actual. de las disposiciones legales*. Lima: Verástegui.
- [32] Carvalho Junior, Pedro. 2023. *The Role of Brazil’s Inheritance System in Wealth Inequality*. Working Papers Series, num. 1, International Policy Centre for Inclusive Development.
- [33] Castillo, César. 2015. *Distribución factorial del ingreso en el Perú 1940-2013*. Master Dissertation. Universidad del Pacífico, Lima.
- [34] Castillo-García, César. 2025. “Champions of Free Trade: The Peruvian Proposal for a Conference on Commercial Policy at Bretton Woods”, In: Ghosh, Atish and Fabio Masini (Eds.) *International Economic and Monetary Architecture at the Crossroads: Bretton Woods at 80*. Oxon, Uk and New York, US, Routledge, pp. 30-54.
- [35] CEPAL. 2024. *CEPALSTAT. Base de Datos y Publicaciones Estadística*. <https://webapp.inei.gob.pe:8443/sirtod-series/>.
- [36] Contreras, Carlos. 2006. “Las contribuciones directas y formación del Perú republicano”. In: Jaúregui, Luis. (Ed.) *De riqueza e inequidad: el problema de las contribuciones directas en América Latina, siglo XIX*. México, D. F.: Instituto Mora, pp. 123-48.
- [37] De Rosa, Mauricio. 1997. *Accumulation, Inheritance and Wealth Distribution: First Estimates of the Untold Half*. Serie Documentos de Trabajo, 07/22. Montevideo: Udelar, FCEA, Iecon.
- [38] De Rosa, Mauricio, Ignacio Flores, and Marc Morgan. 2022. *More Unequal or Not as Rich? Revisiting the Latin American Exception*. Working Papers Series, num. 53, Stone Center on Socio-Economic Inequality.

- [39] Dietrich, Jonas, Gastón Nievas, Moritz Odersky, Thomas Piketty, and Anmol Somanchi. 2025. *Global Wealth, Accumulation and Ownership Patterns, 1800-2025*. Technical Note, num. 2025/03, World Inequality Lab.
- [40] Dúmenil, Gérard and Dominique Lévy. 1993. “Why does profitability matter? Profitability and stability in the US since 1950s”. In: *Review of Radical Political Economics*, vol. 25, num. 1, pp. 27-61.
- [41] Durand, Francisco. 2003. *Riqueza económica y pobreza política: reflexiones sobre las elites del poder en un país inestable*. Lima: Fondo Editorial de la Pontificia Universidad Católica del Perú.
- [42] Echeopar, Luis. 1949. “Los impuestos vigentes en el Perú”. In: *Derecho PUCP*, num. 9, pp. 61-88.
- [43] EsSalud. 2021. *Historia de la seguridad social en el Perú*. Lima: EsSalud.
- [44] Ferrero, Rómulo. 1952. “Aspectos económicos de las pensiones de jubilación”. In: *Informaciones Sociales*, vol. 7, num. 4, pp. 5-22.
- [45] Ferrero, Rómulo, and Arthur Altmeyer. 1957. *Estudio económico de la legislación social peruana y sugerencias para su mejoramiento*. Lima: Santiago Valverde, S.A.
- [46] Ferrero, Rómulo. 1963a. “La Cámara de Comercio de Lima entre 1939 y 1962.” In: *Historia de la Cámara de Comercio de Lima*. Lima: Cámara de Comercio de Lima, pp. 213-371.
- [47] Ferrero, Rómulo. 1963b. *La realidad económica de los beneficios sociales (edición revisada)*. Lima: Centro de Estudios Económicos y Sociales.
- [48] Figueroa, Adolfo. 1982. *El problema distributivo en diferentes contextos socio-políticos y económicos: Perú 1950-1980*. Documento de Trabajo, num. 51. Lima: CISEPA-PUC.
- [49] Flores, Ignacio, Claudia Sanhueza, Jorge Atria, and Ricardo Mayer. 2020. “Top Incomes in Chile: A Historical Perspective on Income Inequality, 1964–2017.” In: *The Review of Income and Wealth*, vol. 66, num. 44, pp. 850-74.
- [50] Foley, Duncan. 2013. “The Long-Period Method and Marx’s Theory of Value.” In: Caspari, Volker (ed.) *The Evolution of Economic Theory. Essays in Honour of Bertram Schefold*. New York: Routledge, pp. 15-38.
- [51] Foley, Duncan and Thomas Michl. 1999. *Growth and Distribution*. Cambridge, MA: Harvard University Press.
- [52] Francese, Maura and Carlos Mulas-Granados. 2015. *Functional Income Distribution and Its*

- Role in Explaining Inequality*. IMF Working Papers, num. 2015/244.
- [53] Glyn, Andrew. 2011. "Functional Distribution and Inequality", In: Nolan, Brian, Wiemer Salverda, and Timothy M. Smeeding (Eds.) *The Oxford Handbook of Economic Inequality*. Oxford: Oxford University Press, pp. 101-26.
- [54] Goldsmith, Raymond. 1962. *The National Wealth of the United States in the Postwar Period*. New Jersey: Princeton University Press.
- [55] González, Francisco, and Valeria Calderón. 2002. *Las reformas tributarias en Colombia durante el siglo XX (I)*. Bogotá: Departamento Nacional de Planeación.
- [56] Goodwin, B. R. 1967. "A Growth Cycle", In: Feinstein, C.H. (ed.) *Socialism, Capitalism and Economic Growth. Essays Presented to Maurice Dobb*. Cambridge: Cambridge University Press, pp. 54-8.
- [57] Gordon, David. 1991. "Inside and Outside the Long Swing: The Endogeneity/Exogeneity Debate and the Social Structures of Accumulation Approach". In: *Review (Fernand Braudel Center)*, vol. 14, num. 2, pp. 263-312.
- [58] Graña, Juan and Damián Kennedy. 2008. *Salario real, costo laboral y productividad. Argentina 1947-2006*. Documentos de Trabajo del CEPED, num. 12.
- [59] Hall, Peter and David Soskice. 2001. *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.
- [60] Hamilton, James D. 2017. *Why You Should Never Use the Hodrick-Prescott Filter*. National Bureau of Economic Research, Discussion Paper num. 23429.
- [61] Harris, Donald. 1983. "Accumulation of Capital and the Rate of Profit in Marxian Theory". In: *Cambridge journal of Economics*, vol. 7, num. 3/4, pp. 311-330.
- [62] Hausmann, Ricardo, Jason Hwang, and Dani Rodrik. 2007. "What You Export Matters." In: *Journal of Economic Growth*, num. 12, pp. 1-25.
- [63] ILO. 2023. *ILOSTAT Database*. <https://ilostat.ilo.org/data/>.
- [64] INEI. 2023. *Perú. Compendio Estadístico 2023*. Lima: Instituto Nacional de Estadística e Informática.
- [65] INEI. 2024. *Series Nacionales*. <https://webapp.inei.gob.pe:8443/sirtod-series/>.
- [66] Jacobson, Margaret and Filippo Occhino. 2012. *Labor's Declining Share of Income and Rising Inequality*. Federal Reserve Bank of Cleveland, Economic Commentary, September.

- [67] Jáuregui Encinas, Miguel. 1941. *La tarifa del impuesto sucesorio*. BA dissertation of Law. Universidad Nacional Autónoma de México.
- [68] Jones, Charles I. 2015. “Pareto and Piketty: The macroeconomics of top income and wealth inequality”. In: *Journal of Economic Perspectives*, vol. 29, num. 1, pp. 29–46.
- [69] Jordan, Soren and Andrew Q. Phillips. 2022. *dynamac: Dynamic Simulation and Testing for Single-Equation ARDL Models*. <https://github.com/andyphilips/dynamac/>
- [70] Kaldor, Nicholas. 1955 . “Alternative theories of distribution”. In: *The Review of Economic Studies*, vol. 23, num. 2, pp. 83–100.
- [71] Kalecki, Michael. 1938. “The Determinants of Distribution of the National Income”. In: *Political Quarterly*, vol. 14, num. 4, pp. 322–31.
- [72] Kalecki, Michael. 1943. “Political Aspects of Full Employment”. In: *Econometrica*, vol. 6, num. 2, pp. 97–112.
- [73] Kubler, George. 1952. *The Indian Caste of Peru, 1795-1940*. Smithsonian Institution, Institute of Social Anthropology, Washington, D.C.
- [74] Lavoie, Marc, and Engelbert, Stockhammer. 2013. *Wage-led growth: An Equitable Strategy for Economic Recovery*. London: Palgrave MacMillan.
- [75] Li, Zhi and Minqi Li. 2015. “China’s Falling Rate of Profit and the Coming Economic Crisis”. In: *Economic and Political Weekly*, vol. 50, num. 41, pp. 27, 29-31.
- [76] Maito, Esteban. 2014. *The historical transience of capital: the downward trend in the rate of profit since XIX century*. MPRA Paper 55894, University Library of Munich, Germany.
- [77] Maito, Esteban. 2018. “The Tendency of the Rate of Profit to Fall Since the Nineteenth Century and a World Rate of Profit.” In: Carchedi, G. and Roberts, M. (eds.) *World in Crisis: a Global Analysis of Marx’s Law of Profitability*. Chicago: Haymarket Books.
- [78] Marglin, Stephen and Amit Bhaduri. 1990. “Profit Squeeze and Keynesian Theory.” In: Marglin, Stephen, and Juliet Schor (eds.) *The Golden Age of Capitalism: Reinterpreting the Postwar Experience*. Oxford: Oxford University Press, pp. 153 -86.
- [79] Mattei, Clara. 2022. *The Capital Order: How Economists Invented Austerity and Paved the Way to Fascism*. Chicago: University of Chicago Press.
- [80] Milanovic, Branko. 2017. “Increasing Capital Income Share and Its Effect on Personal Income Inequality”, In: Boushey, Heather, J. Bradford DeLong and Marshall Steinbaum (Eds.) *After Piketty: The Agenda for Economics and Inequality*. Cambridge, MA: Harvard University Press,

pp. 235-258.

- [81] Milanovic, Branko. 2019. *Capitalism, Alone. The Future of the System That Rules the World*. Cambridge, MA: Harvard University Press.
- [82] Morgan, Marc. 2015. *Income Concentration in a Context of Late Development: An Investigation of Top Incomes in Brazil using Tax Records, 1933–2013*. MA dissertation of Public Policy and Development. Paris School of Economics.
- [83] Morgan, Marc. 2018. *Essais sur la Répartition du Revenu: Perspectives Méthodologiques, Historiques et Institutionnelles avec Applications au Cas du Brésil (1926-2016)*. PhD dissertation of Economics. École des Hautes Études en Sciences Sociales.
- [84] Morgan, Marc and Pedro Carvalho Junior. 2021. “Taxing Wealth: General Principles, International Perspectives and Lessons for Brazil”. In: *Brazilian Journal of Political Economy*, vol. 41, num. 1, pp. 44-64.
- [85] Ocampo, José Antonio. 2017. “Latin America’s Development: a Short Historical Account”, In: Popov, Vladimir, and Piotr Dutkiewicz (Eds.) *Mapping a New World Order. The Rest Beyond the West*. Cheltenham: Oxford University Press, pp. 137-160.
- [86] Ostry, Jonathan D., Prakash Loungani, and Andrew Berg. 2019. *Confronting Inequality*. Columbia University Press.
- [87] Palley, Thomas I. 2014. *Rethinking wage vs. profit-led growth theory with implications for policy analysis*. IMK working paper.
- [88] Pasinetti, Luigi L. 1962. “Rate of Profit and Income Distribution in Relation to the Rate of Economic Growth”. In: *The Review of Economic Studies*, vol. 29, num. 4, pp. 267–279.
- [89] Paulet, Pedro E. 1938. “La Renta Nacional del Perú”. In: *Informaciones Comerciales, Económicas y Financieras del Perú*, vol. 2, num. 9, pp. 243-250.
- [90] Pedagua, Luis. 2009. “Alternativas metodológicas para el empalme estadístico de series temporales: caso Venezuela 1950-2005”. In: *Temas de Coyuntura*, num. 59, pp. 7–38.
- [91] Pesaran, M. Hashem, and Yongcheol Shin. 1999. “An Autoregressive Distributed-Lag Modelling Approach to Cointegration Analysis”. In: Steinar Strøm (ed.) *Econometrics and Economic Theory in the 20th Century. The Ragnar Frisch Centennial Symposium*. Cambridge, UK: Cambridge University Press, pp. 371-413.
- [92] Pesaran, M. Hashem, Yongcheol Shin, and Richard J. Smith. 2001. “Bounds Testing Approaches to the Analysis of Level Relationships”. In: *Journal of Applied Econometrics*, vol. 16,

num. 3, pp. 289-326.

- [93] Piketty, Thomas. 2014. *Capital in the Twenty-First Century*. Cambridge, MA: Harvard University Press.
- [94] Piketty, Thomas. 2019. *Capital and Ideology*. Cambridge, MA: Harvard University Press.
- [95] Piketty, Thomas. 2022. *A Brief History of Equality*. Cambridge, MA: Harvard University Press.
- [96] Piketty, Thomas and Gabriel Zucman. 2014. "Capital is Back: Wealth-Income Ratios in Rich Countries 1700-2010". In: *The Quarterly Journal of Economics*, vol. 129, num. 3, pp. 1255-1310.
- [97] Plehwe, Dieter, Quinn Slobodian and Philip Mirowski. 2020. *Nine Lives of Neoliberalism*. London - New York: Verso.
- [98] Portocarrero, Gonzalo. 1983. *De Bustamante a Odría. El fracaso del Frente Democrático Nacional 1945-1950*. Lima: Mosca Azul editores.
- [99] Prebisch, Raul. 1950. *The Economic Development of Latin America and its Principal Problems*. Santiago, Chile: Economic Commission for Latin America.
- [100] Ranaldi, Marco. 2022. "Income Composition Inequality". In: *The Review of Income and Wealth*, vol. 68, num. 1, pp. 139-160.
- [101] Revista de Economía y Finanzas. 1936. "Caja Nacional de Seguro Social". In: *Revista de Economía y Finanzas*, August, num. 43-44, pp. 2-3.
- [102] Roca, Santiago. 1975. *Las cooperativas azucareras del Perú*. Lima: Esan / Campodónico ediciones.
- [103] Rodríguez Weber, J. 2017. *Desarrollo y Desigualdad en Chile (1850-2009). Historia de su economía política*. Santiago: DIBAM-Centro de Investigaciones Diego Barros Arana.
- [104] Rugitsky, Fernando. 2013. "Degree of Monopoly and Class Struggle: Political Aspects of Kalecki's Pricing and Distribution Theory." In: *Review of Keynesian Economics*, vol. 1, num. 4, pp. 447-464.
- [105] Schuldt, Jürgen. 1987. "Desinflación selectiva y reactivación generalizada en el Perú 1985-1986". In: *El Trimestre Económico*, vol. 54, Special Number: Planes Antinflacionarios, pp. 313-50.
- [106] Seminario, Bruno. 2015. *El desarrollo de la economía peruana en la era moderna. Precios, población, demanda y producción desde 1700*. Lima: Centro de Investigación de la Universidad

del Pacífico - CIUP.

- [107] Seminario, Bruno, and Jorge Fernández-Baca. 1991. *Primer semestre 1991 : Evolución de la economía peruana*. Lima: Centro de Investigación de la Universidad del Pacífico.
- [108] Shaikh, Anwar, and Ahmet Tonak. 1994. *Measuring the Wealth of Nations: The Political Economy of National Accounts*. Cambridge, UK: Cambridge University Press.
- [109] Shea, Justin M. 2021. *neverhpfiler: An Alternative to the Hodrick-Prescott Filter*. <https://justinmshea.github.io/neverhpfiler/>
- [110] Stockhammer, Engelbert and Stefan Ederer. 2007. *Demand effects of the falling wage share in Austria*. Department of Economics Working Papers. Vienna University of Economics and Business.
- [111] Streeck, Wolfgang. 2011. "The Crises of Democratic Capitalism." In: *New Left Review*, num. 71, pp. 5-29.
- [112] Sulmont, Denis. 1978. "Crisis, huelgas y movimientos populares urbanos en el Perú." In: *Debates En Sociología*, num. 3, pp. 1-35.
- [113] Sulmont, Denis. 1980. *El movimiento obrero peruano (1890-1980) : reseña histórica*. Lima: Tarea.
- [114] Taylor, Lance. 1979. *Macro Models for Developing Countries*. New York: McGraw-Hill.
- [115] Taylor, Lance. 2004. *Reconstructing Macroeconomics: Structuralist Proposals and Critiques of the Mainstream*. Cambridge, MA: Harvard University Press.
- [116] Taylor, Lance. 2014. "The Triumph of the Rentier? Thomas Piketty Versus Luigi Pasinetti and John Maynard Keynes." In: *International Journal of Political Economy*, vol. 43, num. 3, pp. 4-17.
- [117] Taylor, Lance, and Özlem Ömer. 2020. *Macroeconomic Inequality from Reagan to Trump. Market Power, Wage Repression, Asset Price Inflation, and Industrial Decline*. Cambridge, UK: Cambridge University Press.
- [118] Taylor, Milton, Robert Mundell, Wilfred Pine, Kenyon Poole, David Meiselman, Gustavo Cavañas, et al. 1969. *Estudio Fiscal del Perú*. Washington D.C.: Unión Panamericana/Organización de los Estados Americanos [Organization of American States].
- [119] Thorp, Rosemary. 1987. "The APRA Alternative in Peru: Preliminary Evaluation of Garcia's Economic Policies". In: *Bulletin of Latin American Research*, vol. 6, num. 2, pp. 163-82.

- [120] Thorp, Rosemary and Graciela Zevallos. 2001. "Las políticas económicas del régimen de Fujimori: ¿un retorno al pasado?". In: *Economía*, vol. 24, num. 47, pp. 9-42.
- [121] Webb, Richard and Adolfo Figueroa. 1975. *Distribución del ingreso en el Perú*. Lima: Instituto de Estudios Peruanos.
- [122] Weisskopf, Thomas. 2013. "Marxian Crisis Theory and the Rate of Profit in the Postwar U.S. Economy". In: *Cambridge journal of Economics*, vol. 3, num. 4, pp. 341-78.
- [123] WID. 2023. *World Inequality Database*. <https://wid.world/data/>.
- [124] Wise, Carol. 2003. *Reinventing the State. Economic Strategy and Institutional Change in Peru*. Ann Arbor: The University of Michigan Press.
- [125] Zegarra Russo, Juan. 1966. *La jubilación y los beneficios sociales en el Perú*. Lima: Centro de Documentación Económico-Social.

A Appendix. Methodological Summary

A.1 Factor Income Shares

To build the Peruvian factor shares from 1942 to 2022, I revisit and extend previous series constructed for Peru by Castillo (2015) and provided by Alarco and Castillo (2019). The main inputs are the reports of National Accounts published by the BCRP, INE, and INEI mentioned in subsection 2.2 of this paper. Table A1 summarizes the documents used in this work and their coverage. In the table I also include the paper of García (2013) who provides estimations for the mixed-income share between 1990 and 2010.

As previously discussed, the main difficulty lies in combining the different time series of factor income shares which are discontinuous and which show differences in levels given that they come from different input-output matrices. Hence, it is necessary to overlap them following an explicit criterion. Such a method is found in Pedagua (2009), who provides a simple but useful formula to interpolate the different time series of the GDP measured by the income approach:

$$\hat{y}_{t-n,base_{t_1}} = y_{t-n,base_{t_0}} * \epsilon_{t_1,t_0}^{\frac{(t-n)-t_0}{t_1-t_0}} ; \text{ where } \epsilon_{t_1,t_0} = \frac{y_{t,base_{t_1}}}{y_{t,base_{t_0}}} \quad (\text{A.1})$$

$\hat{y}_{t-n,base_{t_1}}$ is the interpolated value of the national account n years before t , $y_{t-n,base_{t_0}}$ is the value of the account reported in the same year but for a different base year, and ϵ_{t_1,t_0} is a measurement error representing the gap between the values of the account for base year t_1 and base year t_0 . This formula has two advantages: it lets us work with the series in levels and it provides interpolated values for the GDP and its components while preserving the base years of the Peruvian national accounts (1963, 1973, 1979, 1994 and 2007). Instead of directly working with the factor income shares, this approach requires the reconstruction of the levels of each account. To maintain continuous but parsimonious shares we will take as a reference the last base year of the Peruvian national accounts.

Table A1: Factor Income Shares, Data Coverage

Source	Wages	Profits	Mixed Income
Renta Nacional del Perú, BCRP (1951, 1961)	1942-1961	1942-1961	1942-1961
Cuentas Nacionales del Perú, BCRP	1950-1974	1950-1974	1950-1974
Yearly Reports, BCRP (1983, 1986, 1989, 1990)	1974-1990	1974-1990	1974-1990
Cuentas Nacionales, INE (1981)	1970-1981	1970-1981	
Oferta y demanda global, INEI (2013)	1991-2006	1991-2006	
Norberto García (2013)	1990-2010	1990-2010	1990-2010

Continued on next page

Table A1 – continued from previous page

Source	Wages	Profits	Mixed Income
National Accounts Report, INEI (2013-2023)	1990-2022	1990-2022	1990-2022

Following is a summary of the reconstruction method that is explained in Castillo (2015). I started by using the formula in equation (A.1) to interpolate the GDP series in levels, based on the accounting structure in equation 1. It is important to begin with data in levels, given that the direct interpolation of the shares will create unexpected movements in the resulting factor income shares. I considered as starting point the most recent series of the nominal GDP from 1994 to 2022, which are available in the national accounts with base year 2007 in million nuevos soles (INEI 2014a, 2024). Then, I divided the series by 10^9 to transform the currency from nuevos soles to soles oro. Finally, I interpolated the available time series from previous national account reports and applied equation (A.1) backwards for the overlapped years. For data published after 1985, I also consider the currency changes applied to the last available series. The procedure is similarly applied to the other accounts in equation 1 with exclusion of Π_t , which is obtained as a residual, and the mixed-income share. Only the *CFC* and the *Mixed_Income* require additional data for their reconstruction.

It is worth noting the many difficulties encountered during the reconstruction of the mixed-income shares. I began by reconstructing the agricultural component of the mixed-income account. I corrected the observations of this component for the early 1940s, when it was overestimated due to the Second World War commodity boom cycle. Therefore, I constructed an index of value-added for the agriculture industry based on Seminario (2015). With this index, I corrected the observations of the agricultural mixed-income share for the years 1942-1945. Afterwards, I estimated the non-agricultural component of the mixed-income share by utilizing the information of national accounts at the industrial level. However, such time series are not available for the period 1990-2000. To overcome the lack of this information, I utilized the time series of the income of urban self-employment published by García (2013). With such an income series I replicated the movements of the non-agricultural mixed income. Finally, I obtained the final mixed-income account by combining the agricultural and non-agricultural time series.

A.2 DINA Methodology: Accounting Template for Pre-Tax and Post-Tax Disposable Income

I followed the DINA methodology to obtain additional series of the pre-tax and post-tax disposable income ($PTDI_t$) in current prices. First, I calculated the aggregate of the main account of reference according to the DINA approach: the net national income or pre-tax national income (NNI_t). Based on Blanchet, Chancel, Flores, Morgan et al. (2024), NNI_t in equation equation A.2 was constructed by adding the Net Foreign Income (NFI_t), which represents the net foreign income flows to both

domestic labor and capital, and by subtracting the consumption of fixed capital (CFC_t). The NFI_t account is obtained as the interpolated series from three different sources:

- 1942-1950: balance of current foreign transactions from the BCRP's *Renta Nacional del Perú* minus trade balance from the national accounts (BCRP 1951).
- 1950-1970: net foreign factor payments account from the BCRP's *Cuentas Nacionales del Perú* (BCRP 1966, 1970, 1976).
- 1970-2022: net foreign income aggregate series (account `mnnfin_999_i_PE`) in current soles from WID (2023).

$$NNI_t = GDP_t + NFI_t - CFC_t \quad (A.2)$$

The account NNI_t is a useful input to reconstruct the post-tax disposable income $PTDI_t$ (national income after taxes and replacement income), which is the income account that describes post-tax, post-transfer income before in-kind transfers and government spending. In [equation A.3](#), T_P_t is the sum of indirect taxes (taxes on consumption, production, exports and imports), T_Dir_t is the sum of the direct taxes (income and wealth taxes), $Net_Soc_Transf_t$ is the net income from the social insurance system (replacement income), and Soc_Benef_t represents the sum of social assistance benefits in cash provided by the government. According to Blanchet, Chancel, Flores, Morgan et al. (2024), the post-tax disposable income is not comparable to the net national income. Yet, it is a useful tool to analyze the effects of direct and indirect taxation as well as some features of the system of social transfers and social insurance.

$$PTDI_t = NNI_t - T_P_t - T_Dir_t + Net_Soc_Transf_t - Soc_Benef_t \quad (A.3)$$

In following the methodology of Blanchet, Chancel, Flores, Morgan et al. (2024), the net replacement income $Net_Soc_Transf_t$ is obtained by using a 'broad' definition. The justifications for this decision are that (1) there is no additional information about the investment income payable to pension entitlements and (2) there are no unemployment insurance benefits in the Peruvian system:

$$Net_Soc_Transf_t = Soc_Transf_t - Soc_Contr_t$$

To obtain the amount of social transfers (Soc_Transf_t), I used the information published in several editions of the *Anuario Estadístico del Perú* (Statistical Yearbook of Peru) and other official sources. The difficulties in gathering continuous series for this data show the complex political and economic

processes affecting the pension and social security systems in Peru. Below I describe the sources from which I directly calculated the data, without operating any interpolation:

- 1942-1947: total sum of social insurance expenditures (based on benefits for old age, disability, death, sickness and maternity) from Caja Nacional del Seguro Social (National Social Insurance Fund) from the *Anuario Estadístico del Perú* 1944-1945, 1946, and 1947 (Ministerio de Hacienda y Comercio 1947, 1948, 1949).
- 1948-1950: total sum of social insurance expenditures (based on benefits for old age, disability, death, sickness and maternity) from the Seguro Social Obrero (Workers' Social Security) and total sum of social insurance expenditures from the Asociación Mutualista Magisterial (Teacher's Mutual Aid Society) from the Ministry of Treasury and Commerce's *Anuario Estadístico del Perú* 1948-1949 and 1950 (Ministerio de Hacienda y Comercio 1951, 1953).
- 1951-1962: total sum of pension benefits paid by the Seguro Social del Empleado (Employees' Social Security), the Asociación Mutualista Magisterial (Teacher's Mutual Aid Society), and the Seguro Social Obrero (Workers' Social Security) from the Ministry of Treasury and Commerce's *Anuario Estadístico del Perú* 1955, 1956-1957, 1958-1966 (Ministerio de Hacienda y Comercio 1958, 1959, 1969).
- 1963-1969: total sum of pension benefits paid by the Seguro Social del Empleado (Employees' Social Security) and the Seguro Social Obrero (Workers' Social Security) based on the *Anuario Estadístico del Perú* 1967-1969, 1970-1971 vol. 2 (Ministerio de Hacienda y Comercio 1973, 1974).
- 1970-1997: sum of social transfers from the general government balance sheet (series [2199]) published by ECLAC's Databases and Statistical Publications - CEPALSTAT (2023).
- 1998-2022: sum of expenditures on transfers from the private and public pensions systems (ONP-FONAHPU), based on INEI's *Compendio Estadístico del Perú 2023* and INEI's Series Nacionales (INEI 2023, 2024).

Additionally, to calculate the social contributions (Soc_Contr_t) I followed similar sources as for the previous account, as well as the reports of National Accounts for Peru:

- 1942-1949: the account of employees' and workers' social security contributions from the BCRP's *Renta Nacional del Perú* (BCRP 1951).
- 1950-1974: social contributions' account from the BCRP's *Cuentas Nacionales del Perú* (BCRP

1966, 1970, 1976).

- 1975-1978: sum of social insurance contributions and imputed contributions not based in social insurance from INE's *Cuentas Nacionales* (INE 1981).
- 1979-1989: imputed social contributions (D632) from INE's *Cuentas Nacionales. Sectores Institucionales* (INEI 1990).
- 1990-2000: social security contributions from ECLAC's *Anuario Estadístico de América Latina 1998* (CEPAL 1999) and from the general government's balance sheet (series [2199]) published by CEPALSTAT (CEPAL 2023).
- 2001-2022: sum of contributions to the ONP, the healthcare system (EsSalud) and the solidarity contribution for social security assistance from INE's *Compendio Estadístico del Perú 2023* and INE's *Series Nacionales* (INEI 2023, 2024).

In the same way, I reconstructed the components of the direct (T_{Dir_t}) and indirect (T_{P_t}) taxation. This is also a difficult task given that the Peruvian tax system has experienced several changes during the second half of the twentieth century. However, we will see in section 2.4 that tax regressivity and the important place of indirect taxation are features that have persisted over time.

$$T_{Dir_t} = T_{Income_t} + T_{Wealth_t}$$

First, the structure of T_{Dir_t} is divided into two aggregate components: income taxes (T_{Income_t}) and wealth taxes (T_{Wealth_t}). The most important sources for those accounts are the aforementioned *Anuario Estadístico del Perú* (Statistical Yearbook of Peru) and the Statistical Series published by the BCRP:

- 1942-1945: T_{Income_t} is based on the series of the income taxes from the Ministry of Treasury and Commerce's *Anuario Estadístico del Perú 1944-1945* (Ministerio de Hacienda y Comercio 1947). There are no wealth taxes reported for these years.
- 1946-1970: T_{Income_t} is equal to the sum of the series of the components of the income taxes included in the account of direct taxation, and T_{Wealth_t} is equal to the series of inheritance, successions, and gifts tax from the Ministry of Treasury and Commerce's *Anuario Estadístico del Perú* (various years).
- 1970-2022: T_{Income_t} is equal to the income tax series (PM10089FA), T_{Wealth_t} is taken from the wealth tax (impuesto al patrimonio) series (PM10090FA) from the BCRP's Statistical

Series (BCRP 2024).

The structure of indirect taxes (T_{P_t}) is also intricate, as it is the main source of revenue for the Peruvian government. Indirect taxation is the sum of consumption taxes (T_{Cons_t}), taxes on production (T_{Prod_t}), taxes on exports (T_{X_t}), and custom duties ($Custom_Duties_t$):

$$T_{P_t} = T_{Cons_t} + T_{Prod_t} + T_{X_t} + Custom_Duties_t$$

- 1942-1969: $Custom_Duties_t$ is based on the series of custom duties and fees, T_{Cons_t} is the sum of consumption taxes and the tobacco tax ('estanco'), T_{X_t} is the sum of export taxes, and T_{Prod_t} includes other indirect taxes reported in the Ministry of Treasury and Commerce's *Anuario Estadístico del Perú* (various years) and the government's balance sheet *Cuenta General de la República* 1946-1964 (Ministerio de Hacienda y Comercio 1947, 1949, 1950, 1955, 1956, 1957, 1958, 1966).
- 1970-2022: $Custom_Duties_t$ is based on the series of import taxes (PM10092FA), T_{Cons_t} is the sum of the series of value-added taxes (PM10093FA) and excise taxes (PM10096FA), T_{X_t} is the series of export taxes (PM10091FA), and T_{Prod_t} includes other indirect taxes (PM10099FA) reported in the BCRP's Statistical Series (BCRP 2024). For the years 2000-2022, T_{Prod_t} also includes the series of other taxes on production reported by INEI (2024).

Finally, the series of social assistance benefits in cash (Soc_Benef_t) is obtained by subtracting the series Soc_Transf_t from the central government's account $Transfers_t$, which includes subsidies, pensions and social insurance funds, and foreign transfers and donations from international organizations managed by the government. The account $Transfers_t$ is obtained from different sources:

- 1942-1949: sum of the personal transfers reported in the BCRP's *Renta Nacional del Perú* 1942-1949 (BCRP 1951).
- 1950-1969: $Transfers_t$ is the sum of personal transfers in the BCRP's *Cuentas Nacionales del Perú* (BCRP 1966, 1970, 1976).
- 1970-2022: $Transfers_t$ is based on the series of transfers from the central government (PM10121FA) reported in the BCRP's Statistical Series (BCRP 2024). The observations of 1982-1983 are corrected according to data for the same variable taken from ECLAC's Databases and Statistical Publications - CEPALSTAT (CEPAL 2024).

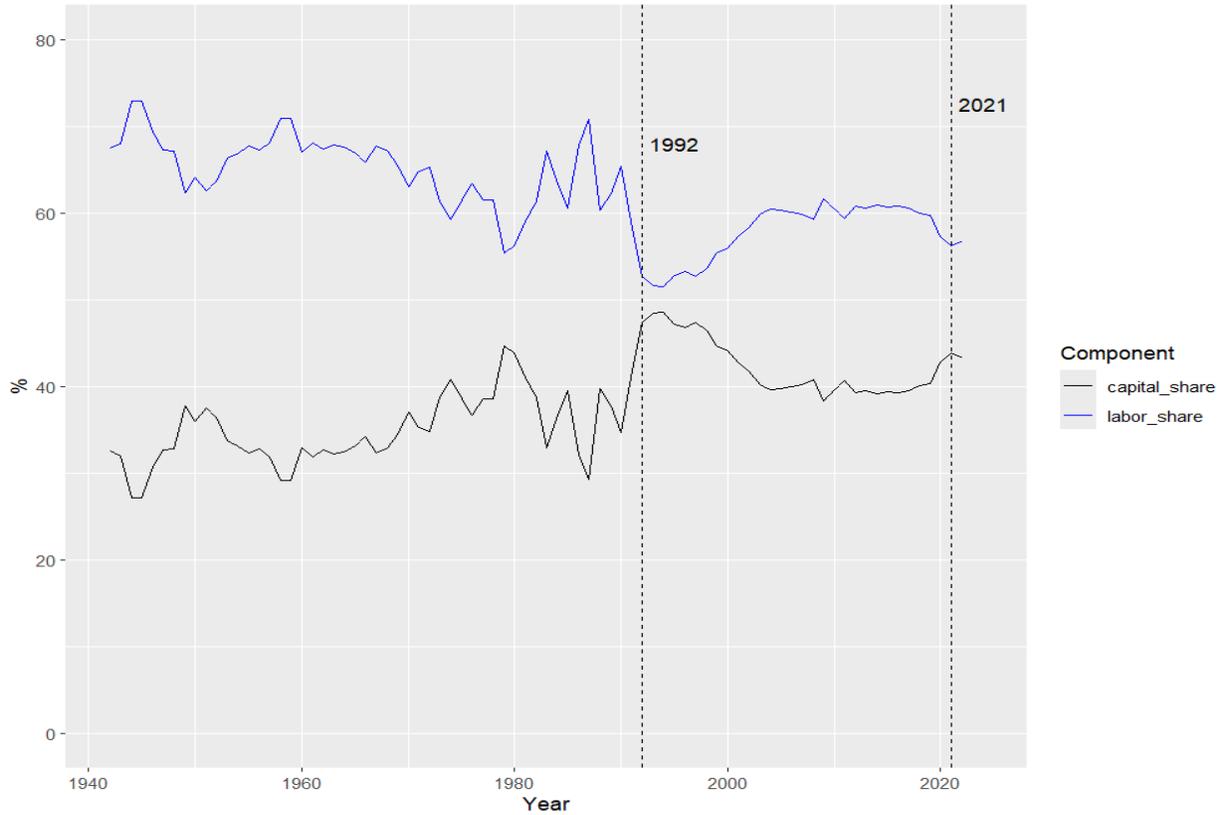
A.3 Labor and Capital Shares of Factor-Price National Income

The previous accounting template enables the reconstruction of the labor share as a fraction of factor-price national income. This serves as a proxy for labor-based income, encompassing both the total wage bill (salaried employment) and the labor component of mixed income, which primarily reflects the earnings of self-employed workers. Following the DINA methodological guidelines in Blanchet et al. (2024), it is assumed that 70% of mixed income is mainly labor or wage-earned income. The accounting template for this series is presented in [equation A.4](#). The account is expressed in factor-price values as the net national income (NNI_t) is net of the taxes on production (T_{-P_t}):

$$Labor_Share_t = \frac{Wages_t + 70\% * Mixed_Income_t}{NNI_t - T_{-P_t}} \quad (A.4)$$

In this case, the values for the sum of wages, mixed income, and taxes on production are derived from the results of [equation 1](#) and discussed in Section 2 of this paper. The NNI_t is obtained from [equation A.2](#) and was discussed in Section 3. Both the labor and capital shares appear in the following [figure A.1](#). In recent decades, there have been two notable episodes in which the gap between labor and capital shares narrowed. The first occurred in 1992, when the labor share reached 53% and the capital share 47%. The latter had been rising since 1990, following the severe hyperinflationary episode of 1988–1989. A similar pattern emerged after the COVID-19 shock: the labor share declined from nearly 60% in 2019 to 56% in 2021, while the capital share increased from 40% to 44%.

Figure A.1: Labor and Capital Shares, 1942-2022.



A.4 Wage Share: Public versus Private Components

The composition of the wage share can be influenced by the weight of the government’s labor share in the economy. This was a concern raised by various technocrats who praised fiscal austerity and criticized the negative effects of expanding government bureaucracy (Roca García 1931). However, the public sector has maintained a stable share of total wages since 1942. To evaluate this, I include series of the composition of the Peruvian wage share based on the following accounting template:

$$Wage_Share_t = General_Gov_t + Corporate_t \tag{A.5}$$

$$Wage_Share_t = General_Gov_t + Private_Ent_t + Public_Ent_t \tag{A.6}$$

The first identity in [equation A.5](#) breaks the wage share down into the general government payroll (including both central and local government workers) and the payroll of public and private companies (labeled as the corporate sector). This accounting structure offers insight into the regressivity of the Peruvian economic system. When employment—and, therefore, the wage bill—relies heavily on the government, it is often argued that the state compensates for the inability

of the private sector to generate new jobs, while declining wages are attributed to the inherent inefficiency of the government. In contrast, examining the performance of both the government and corporate wage bills can reveal whether most of the decline in the wage share instead stems from the extraction of value from workers primarily within the corporate sector.

There is evidence that, in the Peruvian case, the government has not become the main bearer of the national wage bill. More importantly, it appears that the decline in the wage share can be explained by dynamics inherent to the corporate sector. [figure A.2](#) shows the evolution of both the public and private sectors' contributions to the wage bill. The general government's payroll averaged around 20% over the entire 1942–2022 period, with the highest levels occurring in the early 1940s during WWII. This implies that nearly 80% of the wage bill throughout the period has been accounted for by the corporate sector.

An additional nuance in this analysis concerns the role of public enterprises in sustaining national employment. The template in [equation A.6](#). In this formulation, the corporate sector is now divided into two sub-sectors: private enterprises and public enterprises, the latter consisting mainly of the payroll of non-financial public enterprises in which the government has full or partial ownership. For this second set of components, the available data allow the identification of the public enterprise component only beginning in 1968.

[Figure A.3](#) shows the main information for this latter identity. During the junta of 1968–1975—the period of the so-called Revolutionary Government of the Armed Forces—the payroll of non-financial public enterprises rose from around 2.3% to 5%. The highest shares of this payroll in the total wage bill were recorded in the early 1980s, when the percentage hovered around 8%. During the hyperinflation crisis, the share peaked at 9.8%, then declined in 1991 with the wave of privatizations under Fujimori's government. The share of non-financial public enterprises in total wages continued to fall, reaching 1.65% in 2001. This downward trend persisted through 2022, when the share was approximately 0.95% of the wage bill.

Figure A.2: Wage Share: General Government and Corporate Sectors, 1942-2022.

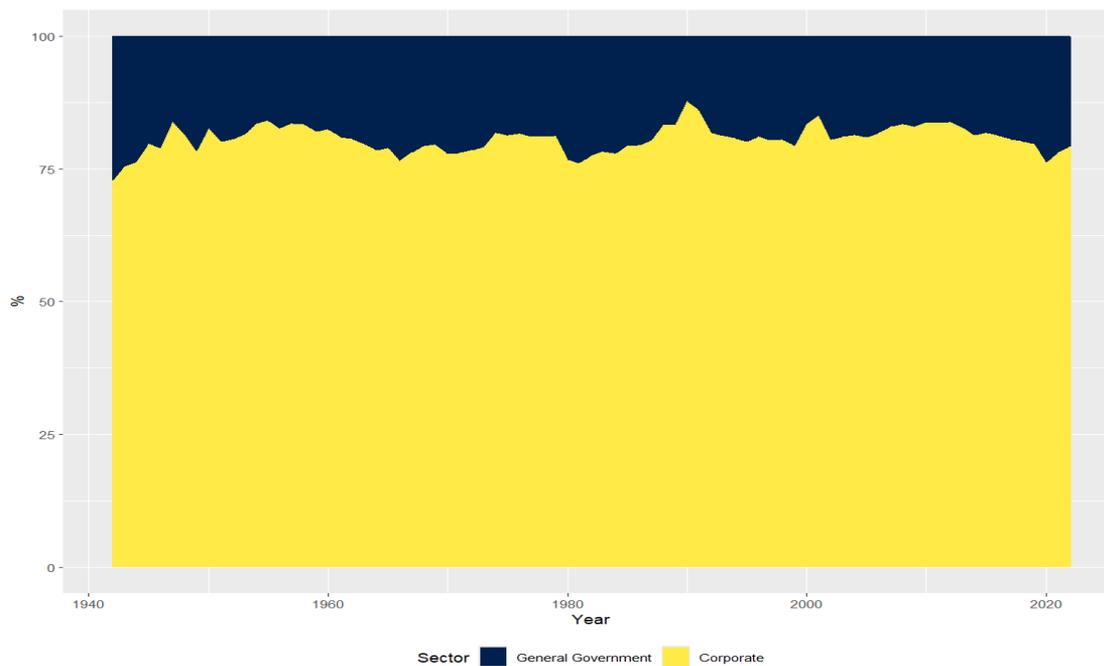
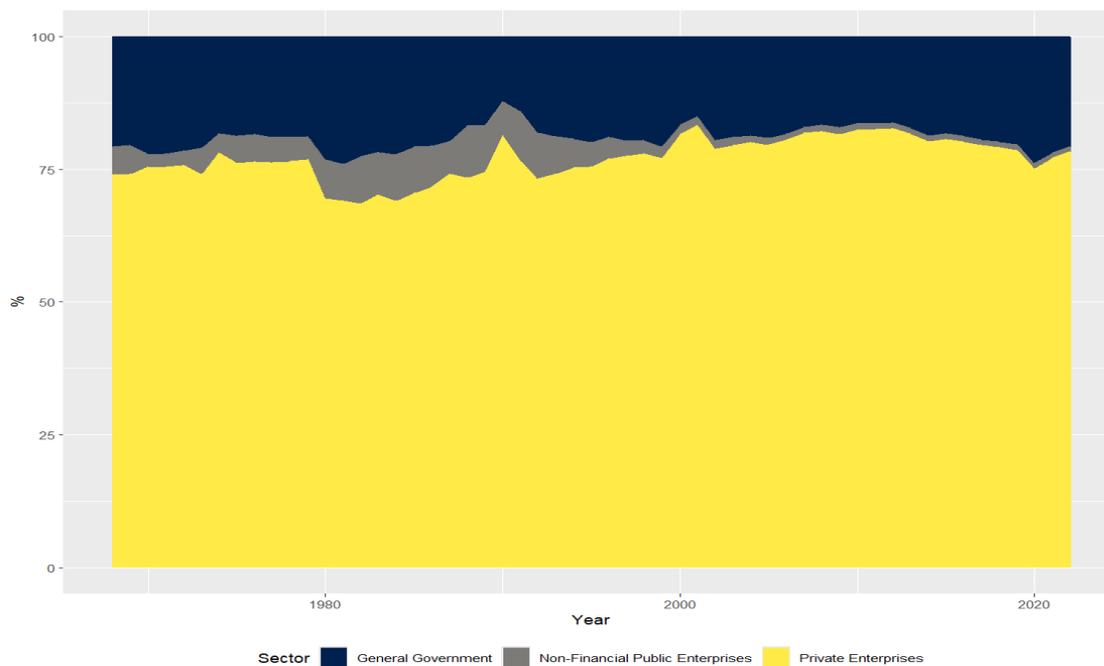


Figure A.3: Wage Share: General Government, Private and Public Enterprises, 1968-2022.



Source: BCRP (1951, 1966, 1968a, 1970, 1974, 1976, 1980, 1984, 1985, 1989, 2025); INEI (1999); Ministerio de Economía y Finanzas (2025).

A.5 Workforce, Employment, and Self-Employment

Series of labor force, employment and self-employment are provided since 1940. The process of construction follows the template in identities (5) and (6), where I presented a decomposition of the labor force between salaried and non-salaried workers. This distinction is important in an economy like Peru, where the employed workforce or labor force is mainly located in the small-business and informal sectors.

$$Workforce_t = Employment_t + Unemployment_t \quad (A.7)$$

$$Employment_t = Salaried_empl_t + Non_Salaried_empl_t \quad (A.8)$$

As with the national accounts, I took as reference the years of labor and population census, which give accurate snapshots of the main workforce variables that this paper takes under consideration. Results for the main variables in [equation A.7](#) and [equation A.8](#) appear in [table A2](#). Following is a list of the main data sources and methods for this reconstruction.

- 1940-1960: workforce and total employment series based on linear extrapolations between workforce and employment observations of 1940 reported by the *Censo nacional de población y ocupación de 1940* (National Census of Population and Employment, 1940) (Ministerio de Hacienda y Comercio 1944), and workforce and employment of 1960 reported by the *Anuario Estadístico del Perú 1967-1969* (Ministerio de Hacienda y Comercio 1973). Information of salaried employment from 1940 to 1958 is obtained as the sum of employees and workers reported in the BCRP's *Renta Nacional del Perú 1942-1949* and *1942-1958* (BCRP 1951, 1960). Salaried employment of 1959 and 1960 is a linear extrapolation between the figure of 1958 and the figure of salaried employment of 1961 reported in the BCRP's *Cuentas Nacionales del Perú 1960-1969* (BCRP 1970).
- 1960-1961: workforce and total employment reported by the *Anuario Estadístico del Perú 1958-1966* (Ministerio de Hacienda y Comercio 1969) and figure of salaried employment of 1961 reported in the BCRP's *Cuentas Nacionales del Perú 1960-1969* (BCRP 1970).
- 1962-1969: workforce was calculated as a retropolation starting in 1970 and based on workforce series reported in the *Anuario Estadístico del Perú 1967-1969* (Ministerio de Hacienda y Comercio 1973). Total employment of 1962-1966 is extrapolated by applying to the figure of 1961 an index of employment published in the *Anuario Estadístico del Perú 1958-1966* (Ministerio de Hacienda y Comercio 1969). Total employment of 1967-1969 is obtained as a linear interpolation between the figures of 1966 and 1970. The salaried employment of 1962-1965, 1967, and 1969 is obtained as a linear interpolation based on the figures of 1961,

1966, and 1968, which are based on the statistics reported in the BCRP's *Cuentas Nacionales del Perú* 1960-1969 (BCRP 1970).

- 1970-2000: the workforce was calculated by Seminario (2015), who relied on estimations of Timmer and de Vries's (2007) *10-Sector Database* of the Groningen Growth and Development Center. Total employment was estimated utilizing different sources: the period 1970-1980 is obtained by multiplying the workforce by the unemployment rates of ILO's Statistical Series - ILOSTAT (ILO 2022), series 1980-1997 is based on unemployment rates from ECLAC's Databases and Statistical Publications - CEPALSTAT (CEPAL 2023), and the period 1998-2000 is obtained from Nunura (2001). Finally, salaried employment series are obtained as a series of extrapolations based on additional data. The series of 1970-1987 are retroplated from the figure of 1988 by using an index of salaried employment in Lima Metropolitana (Garavito 1997). The series of 1988-1997 are retrapolated from the figure of 1998 by using an index (1974=100) of manufacturing employment in firms of more than 100 workers in Lima Metropolitana (Garavito 1999). Finally, the observations of 1998-2000 are estimated utilizing information on the growth of the wage share (\hat{W}_t), the yearly growth average of wages in Lima Metropolitana (\hat{w}_t) (MTPE 2014), and the figure of salaried employment in 2001. The aforementioned calculation appears in [equation A.9](#).
- 2001-2022: workforce, total employment and salaried employment from INEI's report *Perú: evolución de los indicadores de empleo e ingresos por departamentos, 2004-2013* (INEI 2014b) and *Compendio Estadístico 2023* (INEI 2023).

$$Salaried_empl_{t-1} = \left(\frac{1 + \hat{w}_t}{1 + \hat{W}_t} \right) * Salaried_empl_t \quad (A.9)$$

Table A2: *Peruvian Workforce and Employment, 1940-2007 (census data)*

Year	Workforce	Salaried Employment	Nonsalaried Employment	Unemployment (%)
1940	2,521,456	921,226	1,554,113	1.829
1961	3,250,500	1,602,435	1,596,883	1.575
1972	6,587,946	2,493,154	3,722,719	5.648
1981	8,605,376	3,933,195	4,156,182	5.299
1993	12,538,682	5,939,632	5,706,705	7.117
2007	14,907,228	5,861,790	8,336,090	4.758

A.6 Capital Stock

To estimate the rate of profit (r_t), it is necessary to reconstruct series for the value of the stock of fixed capital (K_t) in Peru. In contrast to the capital account estimated by Piketty (2014), K_t is not similar to wealth and excludes financial, foreign and natural assets. I follow the methodology suggested by Seminario (2015), who used the ‘perpetual inventory method’ (PIM) of Goldsmith (1962). The PIM starts off from a benchmark asset figure, and adds on the net additions to the fixed assets year by year. When following the PIM it is necessary to determine a depreciation method that would help to define the net additions from each component of the gross investment. That depreciation method require three specific parameters: the depreciation period (θ), the initial value of the capital stock (I_{t_0}) and the amount of depreciation (D). To obtain the capital stock of Peru since the mid-19th century, Seminario started by reconstructing the series of the gross investment ($I_{i,t}$) of two main components of the gross fixed capital investment since 1824: the gross investment in construction, and the gross investment in machinery and equipment. The author utilized information from the *Anuario Estadístico del Perú (Statistical Yearbook of Peru)* regarding the construction sector and the information from other official reports regarding imports of equipment and machinery.

As an example of the application of PIM, we can describe the procedure that Seminario (2015) utilized to calculate the capital stock of Peru. Seminario obtained initial values of each type of capital stock (I_{i,t_0}) by (1) calculating the ratios of each investment category over the Peruvian GDP of 1896 at constant prices of 1876 and then (2) multiplying those ratios by the GDP of 1896 at constant prices of 1879. Additionally, the author utilized two different values for the useful life of each type of capital: he chose 54 years for the new capital in construction ($\theta_{construction}$) and 19 years for the new capital in machinery and equipment ($\theta_{machinery}$). Those parameters are plugged in to the formula of the rectangular model of depreciation appearing in [equation A.10](#) and the stock of capital in time t appearing in [equation A.11](#):

$$D_{K_i,t} = \begin{cases} 0, & \text{if } t - s < \theta_{K_i} \\ I_{i,t-\theta_{K_i}}, & \text{if } t - s = \theta_{K_i} \end{cases} \quad (\text{A.10})$$

$$K_{i,t} = K_{i,t-1} + I_{i,t} - D_{K_i,t} \quad (\text{A.11})$$

To replicate the aforementioned method, I extended the series of gross investment in construction until 2022 at constant prices of 2007 (million nuevos soles). First, I took from INEI (2024) the data on available series of gross investment in construction at constant prices of 2007 for the period 1994-2022. Then, I followed the method of Seminario (2015) to interpolate previous years of this component of the gross investment. To do so, I used the indices of four series reported by Seminario

(2015) and INEI (2024):

- 1824-1896: series of the gross investment in construction at constant prices of 1876
- 1896-1929: index of the share of GDP in construction with base 1929=100.
- 1929-1954: index of the share of GDP in construction with base 1954=100.
- 1954-1994: index of the share of GDP in construction with base 2012=100.

I utilized the same method for reconstructing the gross investment of equipment and machinery. I took from INEI (2024) the most available data of gross investment in equipment and machinery at constant prices of 2007 (millon nuevos soles) for 1994-2022. The additional data to operate the interpolation also comes from Seminario (2015) and INEI (2024):

- 1824-1896: series of the gross investment in equipment and machinery at constant prices of 1876
- 1896-1954: index of the gross investment in equipment and machinery with base 1954=100.
- 1954-1994: index of the gross investment in equipment and machinery with base 2012=100.

The construction of the definitive series of capital stock of construction as well as equipment and machinery follows the next steps. First, I applied equations (A.10) and (A.11) to obtain the capital stocks $K_{construction}$ and $K_{eq\&mach}$. In table A3, I show the values of the parameters considered in the reconstruction. In this table I indicated the capital-GDP ratios calculated by Seminario (2015) for 1896 at constant prices of 1876. I applied them to an estimation of the GDP of 1896 at million nuevos soles of 2007 to obtain the initial capital stock K_0 for construction as well as equipment and machinery. I took the values of θ_i from Seminario (2015).

Table A3: Parameters for the Reconstruction of the Capital Stock

Capital-GDP Ratio (K_i/Y)		Useful Life (θ_i)		GDP 1896
Construction	Eq. & Machin.	Construction	Eq. & Machin.	
2.7981	0.0792	54	19	4,728,733,756.78

In following Seminario (2015), an additional adjustment is performed in this paper: a recalculation of the weights of each component of the stock of capital. This adjustment corrects the assumption of constant marginal productivity of capital according to the degree of importance of each component

of the total stock of capital. Equation A.12 is a recalculation of a new weight for the i -th component of capital ($\phi_{i,t}$) that includes information about the total depreciation (D_t), the depreciation of the i -th component of capital ($D_{i,t}$), the total GDP, the capital-output ratio (γ), and the old weight of the i -th component of capital ($h_{i,t}$). Equation A.13 shows a recalculation of the growth rate of the stock of capital ($G_{K,t}$), which is equal to the weighted sum of the growth of the components of capital ($G_{i,t}$). This series of the corrected fixed stock of capital are included in the calculation of the rate of profit.

$$\phi_{i,t} = \frac{(\gamma * GDP_t - D_t) * h_{i,t} + D_{i,t}}{\gamma * GDP_t} \quad (\text{A.12})$$

$$G_{K,t} = \sum_{i=1}^n \phi_{i,t} * G_{i,t} \quad (\text{A.13})$$

The series for K_t obtained in equation A.11 are used to extend backward the WID series of market-value non-financial assets (*nwnfa*) for Peru introduced by Bauluz et al. (2025). Specifically, the nominal value of the K_t series is spliced with the WID series, which covers only the period 1980–2023. This step is necessary because the methodology used to construct the WID series differs from the application of PIM used in this paper (Blanco, Bauluz and Martínez-Toledano 2021). As a result, the procedure yields an extended series of Peruvian market-value non-financial assets for 1896–2023 that preserves the trend of the K_t series while remaining comparable with WID series for other countries.

First, the method requires transforming the K_t series—expressed in constant 2007 prices—into nominal values. The deflator is obtained as the ratio between the nominal and the real GDP of Peru from three different sources:

- 1896-1923: nominal GDP in current US dollars and real GDP in constant 1979 US dollars, as published by the BCRP.
- 1923-1942: nominal GDP in current soles and GDP in constant 2007 soles published by the BCRP.
- 1942-2023: nominal and real GDP series obtained alongside the factor shares in this paper.

Based on these sources, three GDP deflator series are constructed: one indexed to 1979 = 100 covering the period 1896–1923, and two indexed to 2007 = 100 covering the periods 1923–1942 and 1942–2023, respectively. These series are subsequently spliced to obtain a unified GDP deflator indexed to 2007=100 for the period 1896–2023.

The nominal K_t series is obtained by multiplying K_t , expressed in constant 2007 soles, by the constructed GDP deflator. Finally, the annual growth rates of nominal K_t for the period 1896–1980 are calculated and applied backward from the first available *nwnfa* observation in the WID series discussed in Bauluz et al. (2025).

A.7 Sources

BCRP. 1951. *Renta Nacional del Perú 1942-1949*. Lima: Banco Central de Reserva de Perú.

BCRP. 1960. *Renta Nacional del Perú, 1942-1958*. Lima: Banco Central de Reserva de Perú.

BCRP. 1966. *Cuentas nacionales del Perú, 1950-1965*. Lima: Banco Central de Reserva de Perú.

BCRP. 1968a. *Cuentas nacionales del Perú 1950-1967*. Lima: Banco Central de Reserva de Perú.

BCRP. 1968b. *Memoria del Banco Central de Reserva del Perú 1968*. Lima: Banco Central de Reserva de Perú.

BCRP. 1970. *Cuentas nacionales del Perú 1960-1969*. Lima: Banco Central de Reserva de Perú.

BCRP. 1974. *Cuentas nacionales del Perú 1960-1973*. Lima: Banco Central de Reserva de Perú.

BCRP. 1976. *Cuentas nacionales del Perú 1960-1974*. Lima: Banco Central de Reserva de Perú.

BCRP. 1980. *Memoria del Banco Central de Reserva del Perú 1980*. Lima: Banco Central de Reserva de Perú.

BCRP. 1983. *Memoria del Banco Central de Reserva del Perú 1983*. Lima: Banco Central de Reserva de Perú.

BCRP. 1989. *Memoria del Banco Central de Reserva del Perú 1989*. Lima: Banco Central de Reserva de Perú.

BCRP. 1994. *Memoria del Banco Central de Reserva del Perú 1994*. Lima: Banco Central de Reserva de Perú.

BCRP. 1995. *Memoria del Banco Central de Reserva del Perú 1995*. Lima: Banco Central de Reserva de Perú.

BCRP. 2025. *BCRPData*. <https://estadisticas.bcrp.gob.pe/estadisticas/series/anuales>.

CEPAL. 2024. *CEPALSTAT. Base de Datos y Publicaciones Estadística*. <https://webapp.inei.gob.pe:8443/sirtod-series/>.

García, Norberto. 2013. “Fast Economic Growth and Income Distribution (Peru 1990-2010)”. In:

Economie Appliquée, num. 1. <http://www.itf.org.ar/pdf/documentos/892013.pdf>.

INE. 1980. *Cuentas nacionales del Perú 1950-1979*. Lima: Instituto Nacional de Planificación, Oficina Nacional de Estadística.

INE. 1981. *Cuentas nacionales del Perú 1950-1980*. Lima: Instituto Nacional de Planificación, Oficina Nacional de Estadística.

INE. 1982. *Cuentas nacionales del Perú 1950-1981*. Lima: Instituto Nacional de Estadística. Dirección General de Cuentas.

INE. 1988. *Cuentas nacionales del Perú: sectores institucionales, 1950-1987*. Lima: Instituto Nacional de Estadística. Dirección General de Cuentas.

INE. 1990. *Cuentas nacionales del Perú. Sectores Institucionales, 1950-1987*. Lima: Instituto Nacional de Estadística. Dirección General de Cuentas.

INEI. 1990. *Cuentas nacionales del Perú 1989*. Lima: Instituto Nacional de Estadística e Informática.

INEI. 1991. *Cuentas nacionales del Perú: sectores institucionales, 1990*. Lima: Instituto Nacional de Estadística e Informática.

INEI. 1999. *Perú - Compendio de Estadísticas Económicas y Financieras, 1998-99*. Lima: Instituto Nacional de Estadística e Informática.

Ministerio de Economía y Finanzas. 2025. *Cuenta General de la República - Transparencia Económica Perú*. <https://apps5.mineco.gob.pe/ctarepublica/>.

Ministerio de Hacienda y Comercio. 1947. *Anuario Estadístico del Perú 1944-1945*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1948. *Anuario Estadístico del Perú 1946*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1949. *Anuario Estadístico del Perú 1947*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1951. *Anuario Estadístico del Perú 1948-1949*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1953. *Anuario Estadístico del Perú 1950*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1958. *Anuario Estadístico del Perú 1955*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1959. *Anuario Estadístico del Perú 1956-1957*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1969. *Anuario Estadístico del Perú, 1958-1966*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1973. *Anuario Estadístico del Perú, 1967-1969*. Lima: Ministerio de Hacienda y Comercio.

Ministerio de Hacienda y Comercio. 1974. *Anuario Estadístico del Perú, 1970-1971*. Lima: Ministerio de Hacienda y Comercio.

MTPE. 2014. *Anuario estadístico sectorial 2013*. Lima: Ministerio de Trabajo y Promoción del Empleo (MTPE).

Nunura, Juan. 2001. *El empleo en el Perú: 1990-2000*. Lima: Ministerio de Trabajo y Promoción del Empleo - Informe de la Comisión Nacional de Trabajo y Promoción Social.