Distribution in Late Development: The Political Economy of the Kuznets Curse in Brazil

Morgan, Marc; Souza, Pedro

UNIVERSITÉ DE GENÈVE
GENEVA SCHOOL OF SOCIAL SCIENCES
Department of History, Economics and Society

Political Economy Working Papers | No. 4/2025

Distribution in Late Development

The Political Economy of the Kuznets Curse in Brazil

Marc Morgan (University of Geneva)

Pedro H. G. F Souza (IPEA)

Working paper

UNIVERSITÉ DE GENÈVE

Department of History, Economics and Society, University of Geneva, UniMail, bd du Pont-d'Arve 40, CH-1211 Genève 4. T: +41 22 379 81 92. Fax: +41 22 379 81 93

Distribution in Late Development

The Political Economy of the Kuznets Curse in Brazil

Marc Morgan* Pedro H. G. F. Souza†

June 10, 2025‡

Abstract

This paper provides a novel reassessment of the Kuznets curve in the context of Brazil's rapid late development. Using new long-run data that integrate surveys, administrative records, and national accounts, we produce macro-consistent income shares and other distributional indicators since the 1920s. Our findings challenge the conventional Kuznets hypothesis as it has been interpreted in the literature, especially for the underexplored period around the mid-twentieth century. We argue this era is key to understanding what we call the *Kuznets curse*: the tendency in late-developing countries for inequality-induced social conflict to be resolved through authoritarian regimes committed to the high-savers accumulation model. We interpret this pattern through a new theoretical synthesis combining the dialectics of economic structuralism with constructivist and neorealist institutionalism, supported by analysis of elite discourse.

Keywords: Distribution; Late Development; Political Economy; Kuznets; Brazil.
Classification: D31, D33, E64, J31, N36, O15.

*Affiliation: Department of History, Economics and Society, University of Geneva; Paul Bairoch Institute of Economic History, University of Geneva; World Inequality Lab, Paris School of Economics. Email: marc.morgan@unige.ch.

†Affiliation: Instituto de Pesquisa Econômica Aplicada (IPEA); Instituto de Estudos Sociais e Políticos (IESP-UERJ). Email: pedro.ferreira@ipea.gov.br.

‡This is an updated version of our UNU-WIDER Working Paper published at https://doi.org/10.35188/UNU-WIDER/2025/559-2. We thank Kunal Sen, Ravi Kanbur, Andy Sumner, and other organisers and participants of the UNU-WIDER symposium *Kuznets at 70 - Inequality and Structural Transformation* for critical feedback on this draft. For numerous helpful discussions on long-run Brazilian inequality we thank Facundo Alvaredo, Marcelo Medeiros, Thomas Piketty, Rodrigo Orair, Sérgio Gobetti, Fernando Gaiger, Sergei Soares, as well as other researchers at IPEA and the World Inequality Lab. We also thank Javier Rodriguez Weber, Luis Bértola, Pablo Astorga and other seminar participants at the CLADHE VI Conference at the Universidad de Santiago in Chile, as well as participants at the XVI AISPE Conference at the University of Bologna, for helpful comments on previous versions. We gratefully acknowledge funding for the early background research of this work from the *Fundación Ramón Areces*, and from the funding partners of the World Inequality Lab (the ERC, Ford Foundation and INET) and from IPEA.

1 Introduction

"Does inequality in the distribution of income increase or decrease in the course of a country's economic growth?" This was the question that occupied Simon Kuznets in his famous article 'Economic Growth and Income Inequality' (Kuznets, 1955, p. 1). What became known as the 'Kuznets curve' was a crude interpretation of the author's partial answer to his question: as a country undergoes economic development—structural transformation through industrialization to improve average standards of living—the inequality of income between residents will first increase, before eventually decreasing in an inverted-U shape form. Kuznets deduced this profile from the empirical time-series estimates available for the developed economies of his time, principally the United States, but also Britain and other advanced nations. Despite this curve originating from developed country data, it has permeated subsequent scholarship on underdeveloped economies, albeit with heterogeneous results (Alisjahbana et al., 2022).[1]

We argue that the Kuznets curve as commonly understood misrepresents the challenge facing underdeveloped economies regarding growth and distribution. Their being *under*-developed at any point in time relative to the developed economies means that they will be *late*-developers upon initiating an active process of structural change. Kuznets was well aware of the particularly distinct challenge that this simple difference created. Yet it has not received the same attention as his developed-country curve. It is this overlooked side of Kuznets's argument that we address in this paper.

The fundamental premise guiding Kuznets's inquiry into the importance of income inequality data was that "living members of society—as producers, consumers, savers, decision-makers on secular problems—react to long-term changes in income levels and shares" (Kuznets, 1955, p. 2). And if these reactions are connected to "important components of the growth process"—such as biological reproduction, urban migration, saving and investment out of income, domestic versus foreign consumption, and public intervention in the production process—then the link between growth and inequality is substantiated (Kuznets, 1955, p. 19). Swings in these components would then be essential to explain the general growth-distribution dynamic. Crucially, the concavity of Kuznets's curve only kicks in with legal and political interventions limiting the concentration of savings and property among a stable group of wealthy individuals. Kuznets refers to taxation, inflation and different forms of government price controls and market interventions. He notes:

> "All these interventions, even when not directly aimed at limiting the effects of accumulation of past savings in the hands of the few, do reflect the view of society

[1] Kuznets himself attempted to integrate the "scanty" evidence that existed for less developed countries into the analysis, but could only do so with point estimates for India in 1949-50, Ceylon (present day Sri Lanka) in 1950 and Puerto Rico in 1948. Thus, only inferences on the basis of differences in levels with the developed countries could be offered. See Kuznets (1955, pp. 20-21).

> on the long-term utility of wide income inequalities. This view is a vital force that would operate in democratic societies even if there were no other counteracting factors. This should be borne in mind in connection with *changes* in this view even in developed countries, which result from the process of growth and constitute a re-evaluation of the need for income inequalities as a source of savings for economic growth. The result of such changes would be an increasing pressure of legal and political decisions on upper-income shares—increasing as a country moves to higher economic levels." (Kuznets, 1955, p. 9)

In underdeveloped countries the context is very different. In the last five pages of his article before concluding, Kuznets emphasizes that these countries lack ample "middle" classes, given the "sharp contrast between the preponderant proportion of population whose average income is well below the generally low countrywide average, and a small top group with a very large relative income excess" (Kuznets, 1955, p. 22). Therefore, distinct conditions are at work in these countries. Kuznets notes two:

C1 Wider inequality exists at lower levels of average income per capita. This implies two things. First, similar proportional deviations from the average are more painful (materially and psychologically) in underdeveloped countries. Second, given that savings are only possible at much higher relative income levels in underdeveloped countries, the increasing share of savings and capital formation needed for development would tend to increase inequality more as income from the newly created assets would flow to the top of the distribution.

C2 Wider inequality coexists with a low rate of income per capita growth across generations. This implies that there is less hope for improvement. "It was this hope that served as an important and realistic compensation for the wide inequality in income distribution that characterized the presently developed countries during the earlier phases of their growth." (Kuznets, 1955, p. 24)

These conditions imply that the stakes are higher in under-developing countries for development to succeed. This makes Kuznets pose three key questions on the fate of peripheral countries developing late, which make up what we call the *Kuznets curse*.

Q1 "Is the pattern of the older developed countries likely to be repeated in the sense that in the early phases of industrialization in the underdeveloped countries income inequalities will tend to widen before the leveling forces become strong enough first to stabilize and then reduce income inequalities?" (Kuznets, 1955, p. 24)

Q2 "Can the political framework of the underdeveloped societies withstand the strain which further widening of income inequality is likely to generate?" (Kuznets, 1955, p. 25)

Q3 "How can either the institutional and political framework of the underdeveloped societies

> or the processes of economic growth and industrialization be modified to favor a sustained rise to higher levels of economic performance and yet avoid the fatally simple remedy of an authoritarian regime that would use the population as cannon-fodder in the fight for economic achievement?" (ibid)

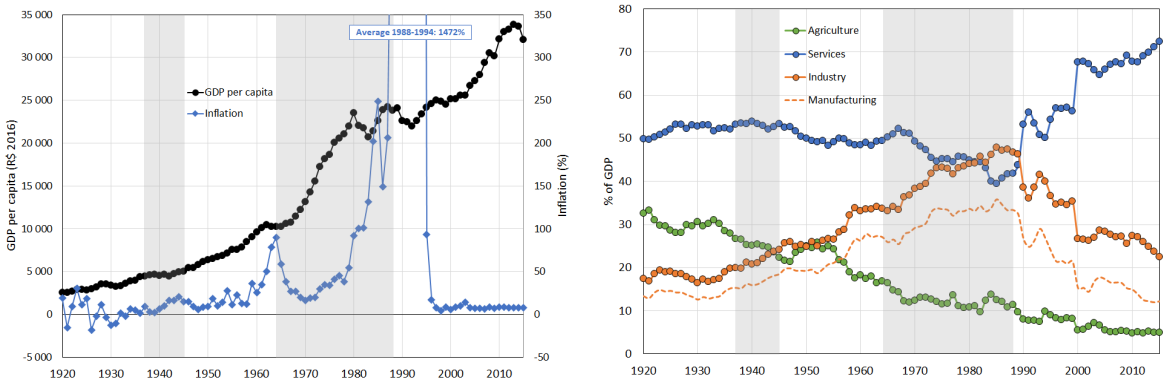
Here Kuznets is digging at the core of political economy applied to late development. Looking to the history of developed economies for guidance is unhelpful precisely because of their different conditions at the outset of their industrialization. These countries had relatively higher average income levels and took considerably longer to reduce inequalities than 20th century expectations, often after multiple centuries during which they developed without the constraints of imposed foreign rule (Lindert, 1986; Alfani, 2024). Nor did these countries face such a binding consumption-investment trade-off at the time of their industrialization, given the existence of less developed consumer markets, including marketing and advertising, and more ample resources and space from the colonized periphery to develop a consumption and investment goods sector.[2] "And yet the stresses of the dislocations incident to early phases of industrialization in the developed countries were sufficiently acute to strain the political and social fabric of society, force major political reforms, and sometimes result in civil war" (Kuznets, 1955, p. 25). Kuznets recognizes this fallacy of historical analogy when writing: "There is danger in simple analogies; in arguing that because an unequal income distribution in Western Europe in the past led to accumulation of savings and financing of basic capital formation, the preservation or accentuation of present income inequalities in the underdeveloped countries is necessary to secure the same result" (p. 26).

In this paper we use Brazilian economic history as a laboratory to address the Kuznets curse, that is, to examine the connection between the distributional pressures that arise during late-development and endogenous political change. Brazil is an interesting case study for numerous reasons. First, the context is one of a large land and labor-abundant peripheral country, engaged in late capitalist development, at least from the 1930s. This brings forth qualitatively and quantitatively distinct challenges, compared to those experienced by the advanced "center" of the world economy, as already alluded to. Moreover, Brazil's early development is contemporary to the important writings of Kuznets, whose analyses were products of that time and thus highly salient to the case study, as evidenced by the significant variation in Brazil's economic growth and structural transformation in Figures 1a and 1b. Second, Brazil forms part of a region historically characterized by high levels of inequality that have been amply investigated in the literature (see section 2 for a summary).

For the task at hand we estimate new income inequality indicators, consistent with distributional national accounts (WIL, 2020). The advantage of this framework is that it distributes the full national income of the country (including retained corporate profits), which better equips us

[2]For a discussion of this trade off in developed and less developed country contexts see Skott (2021) and Skott (2023, ch. 11).

Figure 1: Macroeconomic dynamics in Brazil, 1920-2015



(a) GDP per capita and inflation

(b) Economic sectors in GDP

Notes: authors' calculations using data from IBGE (2006, 2017). Inflation refers to the annual price change as given by the GDP deflator. Shaded areas highlight periods of dictatorship. Agriculture includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production. Industry includes mineral extraction, manufacturing, construction and public utilities (electricity, water, gas, sewage, waste). Services include wholesale and retail trade, transport, government administration, finance, insurance and real estate services, and personal services.

to address questions about economic power in society. We combine harmonized household survey data, income tax tabulations and national accounts data to compute income shares for the full adult population and all income flows from 1976 and for top income groups since 1926. Complementing the inter-personal income distribution we also estimate new series of capital and labour shares and other distributional indicators associated to wages. Resulting estimates show a more nuanced picture for the traditional Kuznets hypothesis than what the literature has suggested based almost exclusively on social-tables and household surveys, which tend to underestimate incomes of richer households. Our estimates, in contrast, more accurately account for upper incomes through the integration of tax and national accounts data in the computation of top income shares.

The major complication for the standard narrative lies in the period roughly between 1950 and 1964, for which existing estimates are either too infrequent, not dis-aggregated enough, or incomplete to be able to offer a coherent analysis. This period is critical as it is generally associated to the end of an era that begins with re-democratization and developmentalist policy, after Gétulio Vargas's authoritarian *Estado Novo* regime, and ends with the military coup of April 1964 on the Labor presidency of João Goulart and subsequent twenty-year dictatorship. The period also brought some of the largest political and institutional shifts in the country's modern history, which accompanied declining inequality metrics and strong growth and structural change. We argue that this period holds the key to the Kuznets curse, and that later periods postponed the challenges that stakeholders from this earlier period were grappling with.

We complement our quantitative analysis with a qualitative analysis centered on discourses and debates among policymakers and economists on what was termed *a questão social* ("the social question"). This sheds light on the distributional dialectics of late-development Furtado (1964) among competing "ideational" conventions in the constructivist theory of institutional change (Blyth, 2002), or "social blocs" in the neorealist theory (Amable and Palombarini, 2009, 2023). Interventions on inclusive growth differed in their approach to the consumption-investment trade-off and inflation constraint—particularly binding in less developed economies—depending on whether shared ideas assumed wage-earners or capital-owners to be the drivers of growth and price instability. Or, to use the terminology of Post-Keynesian macroeconomics, depending on whether the economy was thought to be "wage-led" or "profit-led" (Nikiforos, 2022). In the Brazilian context, this translated into debates over the distributional causes of economic stagnation in the early 1960s (Furtado, 1969; Serra and Tavares, 1971), as well as controversies over inequality trends and drivers in the subsequent decade (Bacha and Taylor, 1978; Andrada and Boianovsky, 2020).

The remainder of this paper is structured as follows. Section 2 reviews the related literature. Section 3 explains the concepts, data and methods we use for our analysis. Section 4 follows with a reexamination of Kuznets swings in light of our inequality estimates. Section 5 discusses the political economy of the Kuznets curse in Brazil by applying the theoretical framework described in section 3. Section 6 concludes.

2 Related Literature

The questions posed by Simon Kuznets in his 1955 Presidential Address to the American Economics Association imply a logic that turns his well known hypothesis into a lesser explored curse for late developing countries trying to catch up with developed country peers. The scale, speed, and direction of change required in these type of countries result in significant distributional pressures "that may necessitate drastic changes in social and political organization" (Kuznets, 1955, p. 25). A similar point was reached by the Brazilian structuralist economist Celso Furtado in his dialectic approach to economic development (Furtado, 1964). With development being a process of social change set off in motion by technical innovations, a chain of cumulative pressures are unleashed on the productive mode, the social structure and the local culture for them to change in an accommodating manner.

It is for these reasons that, according to development economist Albert Hirschman, "highly segmented societies will or should eschew strategies of development that are politically feasible elsewhere because of the availability of the tunnel effect"—an effect that describes the temporary tolerance of inequality based on expected future mobility given current mobility of peers. In these societies standard capitalist development may well "require" a higher degree

of coercion and more centralized economic planning, which are themselves prone to diminish the tolerance for income disparities, a point that echoes the Kuznets curse (Hirschman and Rothschild, 1973, p. 554).

This too echoes Joseph Schumpeter's concept of "creative destruction" as the "essential fact about capitalism"—"a process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one" (Schumpeter, 1942, p. 83). Similarly, Kuznets remarks that "[i]n such a society technological change is rampant and property assets that originated in older industries almost inevitably have a diminishing proportional weight in the total because of the more rapid growth of younger industries" (Kuznets, 1955, p.10). Endogenous political conflicts arise out of these sectoral changes, which often take the form of intra-elite conflicts as shown by Ferraz et al. (2024) for the Brazilian case post-1960. Revolutions in this sense can be seen as replacement among elites for the uncompromising pursuit of economic development.

The Schumpeterian "mutation" absolves the pre-existing social embeddedness of the productive structure in the name of differentiation, profit, and expansion. A "double movement" is liable to occur, according to the theory of Karl Polanyi, whereby a reactive movement from a part of society seeks to protect itself from the initial movement of dissolution and commodification that capitalist development sets forth (Polanyi, 1944).[3] This swing—reminiscent of Kuznets's concept of swing in political terms—can lead to authoritarian forms of politics, among other centralized and democratic forms. Late-developing countries face a greater imperative from modernity to develop more quickly such that Polanyi's double movement of action and reaction may take a more acute form.

Our work also speaks to the institutionalist literature, both its conventional or constructivist strand on economic ideas and conventions, and its neorealist strand on social bloc domination. For the former, ideas about *how* a society can accumulate and progress materially get transmitted into institutions that coordinate expectations about the future to ensure economic and social stability (Blyth, 2002). Given radical uncertainty about the future, economic agents must rely on certain rules of thumb, which in the theory of John Maynard Keynes, are about "*conventional* judgment" (Keynes, 1936, p.214).[4] Conventions in this sense "are the shared ideas about how the economy *should* work" (Blyth, 2002, p. 43). It is these shared ideas that underpin the balance between institutional stability and instability over the long run. Ideas help to construct institutions, which once in place reinforce the ideas that built them through conventions or "national narratives" (ibid). For neorealists, this translates into competitive politics, through which social alliances coalesce around dominant and dominated

[3]Polanyi in his analysis referred to the evolution the advanced Western country in their course of development, not to later independent peripheral countries.

[4]In chapter 12 of his *General Theory*, Keynes' propositions about "animal spirits" and "beauty contests" depend upon conformed beliefs "with the majority or average."

interests that either sustain or challenge these institutions with distinct ideologies (Amable and Palombarini, 2009, 2023). Different social actors try to impose their understanding of this complex phenomenon through various outlets, but a key point is that knowledge is conflictual and is remedied by expressions of power that interact with empirical "facts" and narratives.

The most influential convention regarding economic development is to direct income to individuals with the highest saving propensities, which are those with the highest incomes, as capital accumulation is thought to be directly sourced from individual saving. Keynesian macroeconomics significantly refined this observation by noting that a surplus can either become a leakage or a re-insertion into the circular flow of income, and that future savings are determined by current re-insertions in the form of investment. The historical legitimacy of such a system depends precisely on capital owners contributing enough of their politically-determined surplus to develop society's productive forces (Keynes, 1919, 1936). While market incentives may suffice to bring the necessary private investment about, endogenous pressures from savings and consumption propensities may induce new transformations in institutional structures for further development. As Keynes recognized, the distribution of income is psychologically embedded in prevalent institutions.[5] Where such psychological conditions break down, and private incentives no longer function as engines of full employment and growth, new conventions around a "comprehensive socialization of investment" (Keynes, 1936, p. 378) would have to emerge to coordinate expectations and behaviors of economic agents to guarantee institutional stability.

Kuznets arrived at a similar conclusion when stating that public interventions "even when not directly aimed at limiting the effects of accumulation of past savings in the hands of the few, do reflect the view of society on the long-term utility of wide income inequalities." Specifically, "*changes* in this view [...] constitute a re-evaluation of the need for income inequalities as a source of savings for economic growth" (Kuznets, 1955, p. 9). Arthur Lewis was also brought up on the same convention. In his famous 1954 article 'Economic Development with Unlimited Supplies of Labour' he remarked that "[t]he central fact of economic development is that the distribution of incomes is altered in favour of the saving class", which practically speaking are "people who receive profits or rents" (Lewis, 1954, p. 157). Fundamentally, "[t]he reason why savings are low in an undeveloped economy relatively to national income is not that the people are poor, but that capitalist profits are low relatively to national income. As the capitalist sector expands, profits grow relatively, and an increasing proportion of national income is re-invested" (Lewis, 1954, p. 190). If structural change is premised on capital accumulation in modern high-productivity sectors, then a rise in the profit share of national income should positively correlate with output growth. In the terminology of the distribution-led growth

[5] In the case of the pre-War European order, their persistence relied on "unstable psychological conditions"—an accepting laboring class, docile out of persuasion, convention and authority; and a deferring capitalist, motivated by virtue, the immediate power and posterior prestige of investment, and the pleasures of security and anticipation (Keynes (1919), p. 13).

literature in Post-Keynesian macroeconomics, this implies that late developing economies will be "profit-led" (Marglin and Bhaduri, 1990; Nikiforos, 2022).

We also contribute to the scholarship on economic inequality in Latin America. An influential strand of this literature tended to ascribe its high levels to its colonial institutions (Engerman and Sokoloff, 2012), until Williamson (2015) revisited the evidence to argue for a missed 20th century leveling that swept the developed world, following the legal and political interventions that Kuznets specified. The literature has converged in pinpointing the blame on the the military dictatorships that emerged in many countries between the 1960s and 1980s, Brazil included (Frankema, 2010; Arroyo Abad and Astorga, 2017; Bértola and Williamson, 2017; Gómez León, 2021; Firpo et al., 2022; Astorga, 2024), which among other things prevented the expansion of the middle class (Gómez León, 2019).

The failure of Latin American countries to equalize during this period has not prevented a part of the literature from estimating a Kuznets curve in the long history of Brazilian growth and inequality. For example, Gómez León (2021), in combining Gini estimates from social tables for 1850 to 1950 and from household surveys for 1960 to 2010, is the most explicit reference. The estimates seem to depict a Kuznets curve over the threshold years 1920, 1990, and 2010, with the author claiming economic and political forces drove both the upswings (1920-1990) and the downswings (1990-2010). A similar profile is found by Astorga (2024) using dynamic social tables. A weakness of this literature is that surveys tend to underestimate incomes of richer households.[6]

A long list of studies have used household surveys over the years to analyze different dimensions of economic inequality in Brazil. A much more reduced set of studies have used income tax data for the same intentions. This paper is not the first to use tax records to study inequality (see Mortara (1949a,b); Langoni (1973); Medeiros et al. (2015a,b); Morgan (2015, 2017, 2018); Souza (2016, 2018)), nor is it the very first to seek a combination with survey data (see Morgan (2017, 2018); Souza (2018); Medeiros et al. (2015b, 2018)). More recently De Rosa, Flores, and Morgan (2024) produced similar estimates for Brazil in a regional analysis of Latin American growth and inequality covering ten countries since 2000. Our contribution in this paper is to provide a more detailed view on income inequality across multiple data sources solely for Brazil, and over a longer time horizon, using concepts consistent with the country's macroeconomic accounts to address developmental concerns that were raised by Kuznets and echoed by other scholars.

[6] Arroyo Abad and Astorga (2017) and Astorga (2024) partially get around this limitation by interpreting the residual between national income from macroeconomic statistics and occupational earnings of the bottom and middle groups from social tables as property income, and assigning it to the highest income group (employers and professionals).

3 Methodology

In order to map the coevolution of economic distribution and development for a country like Brazil we need to align various types of indicators. Figures 1a and 1b already present us with standard macroeconomic development metrics. What we need to estimate is a distribution of the closest related concept. This section explains how we do so in the first three subsections. The final subsection outlines the theoretical framework we employ to give a sense to the empirical trends we estimate. We thus contribute a novel synthesis of both empirical data and theoretical frameworks.

3.1 Income Concepts: From GDP to Individual National Income

Following Kuznets (1955), our variables of interest are flow variables and are expressed at the geographic unit of the entire country. The former implies that the indicators of economic development and distribution must relate to income changes, while the latter implies that income ought to be distributed among the national residents of the country. How to distribute income among national residents, and how does this relate to macroeconomic concepts of development, as summarized in Figures 1a and 1b, are the guiding questions here.

The distribution we estimate is the national income distribution for Brazil. Using publicly available data sources described in section 3.2, we want to estimate the distribution of income of all national *residents*. Like most empirical research, our conceptual reach is limited by the available sources to decompose an economic aggregate. The appropriate aggregate for this is the country's national income as reported in the system of national accounts (SNA), which is the final balance of incomes available to residents. Contrary to Gross Domestic Product (GDP), it net outs all income flows repatriated abroad to foreign owners of assets in Brazil and flows repatriated home from Brazilian owners of assets abroad, as well as deducting consumption of fixed capital for depreciation of property as it is not income for residents. Thus, national income is closer to what individuals see on their wage slips and on their profit statements, and hence what they are liable to report to surveyors and tax collectors, than GDP.

What we want to distribute then is national income among residents that participate in the economy as primary producers, earners and consumers.[7] As we are interested in who gets the proceeds from production before tax (either directly from employment or investment, or indirectly from social security), we divide up the national income among residents we see participating in employment and investment markets, or benefiting from the social security

[7]Recall that GDP or national income can be equivalently measured by summing the gross value added (revenues minus costs) of all sectors in the economy, by summing all the primary income received—wages, rents, interests, dividends, retained profits—or by summing all the expenditures on goods and services in the country.

system (mainly pensioners) in the data. These are predominantly adults, so we take the adult population (aged 20 and over) as our population denominator alongside our income denominator of national income. Thus, our distribution measures (pre-tax) national income at the unit of the adult individual. Figure A.1 in Appendix A graphs the evolution of our chosen aggregate—national income per adult—alongside measures of GDP per capita and GDP per adult for comparative purposes.[8]

This approach follows the "distributional national accounts" framework of the *World Inequality Database* (WIL, 2020), which as the name indicates seeks to distribute income reported in the official macroeconomic accounts of a country beyond its institutional sector division (households, corporations, government) and solely among its resident households. In practice this involves distributing the household aggregate among individuals in that sector, and also allocating the primary income (pre-tax) generated in the corporate and government sectors to resident households. This has the advantage, for example, of accounting for retained profits in corporations as income allocated to their owners, which is an important component of structural economic power in the society, as it ultimately relates to property ownership and concentration of private investment.[9] Doing so allows us to bridge micro and macro income concepts and thus analytically reconcile traditional inequality indicators with growth and development indicators in line with Kuznets's original ideas (Kuznets, 1953). The focus on who gets the proceeds of production means we can track who ultimately benefits from growth and development in the population.

3.2 Data sources

To construct the indicators we need to assess the Kuznets curve and curse, we exploit three main data sources: federal personal income tax declarations, household survey data, and the national accounts. A key ingredient in our estimation is the federal income tax, which was created in 1922. The Brazilian Tax Agency has never granted access to income tax microdata to third-party researchers, but fortunately there are numerous publicly available tabulations for federal personal income tax declarations (DIRPF) from 1926 onwardn. We rely on these tabulations, which mostly come from official reports by the national statistics institute (IBGE) in the years up to 1960 and by the tax authority itself after 1960. For some individual years, when data from "official" sources were not available, we exploit tabulations used by independent authors in books or research papers (see Table A.1 in the Online Appendix). In

[8] All series are expressed in constant local currency since 1920. Due to high birth rates, growth rates for the per adult series are higher than the per capita series, and due to the smaller population denominator their levels are also greater.

[9] The primary income of the government sector is simply scaled proportionally to the income distribution so as to fully normalize the distribution to the national income aggregate. This, by definition, has no impact on the resulting income shares.

total we use tax data for 72 years over the 1926-2015 period.

A complex feature of the tax statistics is that for numerous years they tabulate distinct income concepts to the total "fiscal income" concept that we are interested in from them. Not only does the concept of reported income change across years, but so does the concept of the ranking income across brackets and the geographical coverage of the tabulation. We explain how we get around these issues in Online Appendix A.5. Another feature of the tax statistics is that the tax unit is defined by law to be either married couples or individuals, with joint-filing being voluntary. Thus, if we assume all declarations are made by individual filers we would over-estimate inequality levels and may distort trends as the demographic structure of the filing population changes over time (as joint filing was more common in earlier decades). We opt to use the information available on the share of single declarations per bracket to split income equally between the spouses in a couple that declare their income together. Further details of this procedure are explained in Online Appendix A.5.

The survey data corresponds to the microfiles of the *Pesquisa Nacional por Amostra de Domicílios* (PNAD), a large multi-purpose nationally representative survey run by the national statistics institute (IBGE). For our income analysis we use the individual-level microfiles available between 1976 and 2015, which we extract directly from the IBGE website.[10] The number of income variables rose over time from 8 in 1976 to 14 from 1992 onwards, but covers all types of incomes liable to be declared as "fiscal income" on tax returns. However, as is common with surveys everywhere, the PNAD underestimates top incomes, especially business and investment incomes (Hoffmann, 1988; Souza, 2015; Morgan, 2017), but it is otherwise known for being a high quality dataset. It has been the IBGE's flagship household survey for decades and the major source of income data for research on poverty and inequality.

The survey was conducted annually, except in Census years (1980, 1991, 2000 and 2010) and in 1994 (due to budget cuts).[11] The data are nationally representative from 2004 onwards. Previous years do not include rural areas of six northern states (Rondônia, Acre, Amazonas, Roraima, Pará, and Amapá). Moreover, the data for 1976-1979 also excludes rural areas in center-western states (Mato Grosso, Mato Grosso do Sul, Goiás and Tocantins, which was still part of Goiás). According to the 1980 and 1991 Censuses and the recent PNADs, this amounts to excluding 3-4% of the population in the 1970s and about 2% between 1981 and 1990.

We also make use of national accounts statistics to extract data on a host of macro incomes, including national income and its decomposition into sectors, incomes and expenditures. Brazil has a long history of official national accounting, dating back to the 1940s. Our objective is to

[10] `https://www.ibge.gov.br/estatisticas-novoportal/sociais/populacao/9127-pesquisa-nacional-por-amostra-de-domicilios.html?=&t=downloads`.

[11] The PNAD was discontinued in 2015 as IBGE transitioned to PNAD Contínua (PNADC), a quarterly survey with a rotating panel similar to the United States's Current Population Survey (CPS). Both the sampling design and the questionnaire were overhauled, so the PNADC results are not directly comparable to the historical PNAD series for most variables, which is why we decide to end our analysis in 2015.

link all income aggregates, whenever possible, to the national account aggregates to be able to jointly analyze distributional and developmental outcomes. We use the most up-to-date national account and demographic statistics, which generally come from the IBGE, for most years (IBGE, 2000; 2006; 2017), or from the Fundação Getúlio Vargas (FGV) for some selected earlier years, whenever statistics from the IBGE were not available (FGV, 1962). We use comprehensive and integrated national accounts up to the year 2015. This data also permit computations of regional inequality indicators such as the inequality between federal states, which have been computed by Bucciferro and Souza (2020).

The above reports by the national statistics institute provide us with information on unionization throughout the 20th century (IBGE, 2006) and on the division of national income between wages ("employee compensation"), profits ("operating surplus") and self-employed income ("mixed income") (IBGE, 2017) over the 21st century. We complement the latter with data from Frankema (2010) for the 20th century. Finally, we use data on the official statutory minimum wage as defined by the ministry of labour and employment (MTE) from the data repository of the Applied Institute for Economics Research (IPEA).[12] Prior to the unified national wage in 1984, when minimum wages varied by state-district level after being introduced in 1940, this dataset only includes information on the highest minimum wage observed at this level of aggregation. We thus supplement this data with nominal wage data at the state-district level collected by Saboia (1984) for 1940-1983. Figure A.2 in Appendix A shows the regional dispersion of minimum wages estimated from this data.

We complement this quantitative dataset, with qualitative data on how political, technocratic and intellectual elites thought about the distributional implications of late development. These are primary sources from the public archives, as well as from written publications. Full references are provided in section 5.

3.3 Empirical Methodology

In this section we provide a short summary of our empirical estimation of macro-consistent inequality indicators. The accompanying Online Appendix provides more details.

As regular household surveys are only available from 1976, we compute group shares in national income for the entire adult population from this year until 2015. We use methods developed in Blanchet, Fournier, and Piketty (2022) and Blanchet, Flores, and Morgan (2022) to merge information from tax data and household surveys. We then impute missing macro incomes from the household sector and other sectors from historical national accounts data to the merged tax and survey distribution, thus following closely the methodology of WIL (2020), and reproduced in De Rosa, Flores, and Morgan (2024).

[12] See `http://www.ipeadata.gov.br`.

For years prior to 1976 we combine the income tax information, which goes back to 1926, with national accounts denominators to estimate a distribution of personal income for covering the Top 1% of individuals. We then estimate the missing macro incomes from historical national accounts records to impute to this personal distribution so that the Top 1% in the distribution represents the top percentile of national income (as opposed to taxable income). We then join this series together with the complete national income distribution of 1976-2015 for the Top 1%.

3.4 Theoretical Framework

To theorize the political economy of the Kuznets curse in Brazil, we propose a novel theoretical synthesis that develops Kuznets's intuition with insights from a structuralist and dialectic approach to economic development, and from institutionalist political economy, particularly the constructivist and neorealist theories of institutional change. The central mechanism that we assess is the reputation of the influential high-savers accumulation model among Brazilian political and intellectual elites. This model has been the most common way to understand the distributional implications of development, with Kuznets and Lewis among its proponents. It posits that economic development is premised on increasing savings for accumulation, which can only come from redistributing income to upper groups who concentrate the bulk of national savings.

The distributional changes along the Kuznets curve turn into a curse when the resulting distributional conflict that violates path-dependent norms in a context of high inequality harvests an authoritarian regime to force a return to prior pay norms. While the pace of structural change and existing levels of inequality may be proximate causes of the Kuznets curse, we argue that its ultimate cause is the conflict between movements to surpass and preserve the high-savers accumulation model's influence on the conventions, politics and institutions of the country.

Traditional development theory argues that late developing countries face a structural transformation problem (Nurkse, 1953). Structural transformation of the economy, by way of its shifts in technological change, productivity and value-added across sectors and regions, disrupts prevailing patterns of growth and distribution. Pursuing capitalist development implies accepting the forces of "creative destruction" as a "process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one" (Schumpeter, 1942, p. 83). This "mutation" absolves the pre-existing social embeddedness of the productive structure in the pursuit of capital accumulation in modern sectors. Redistribution of savings from old sectors to new sectors involves a double conflict: between old elites and new elites and, once savings have been subsidized and generated in the expansion phase of industrialization, between new elites and

workers over the distribution of growth.

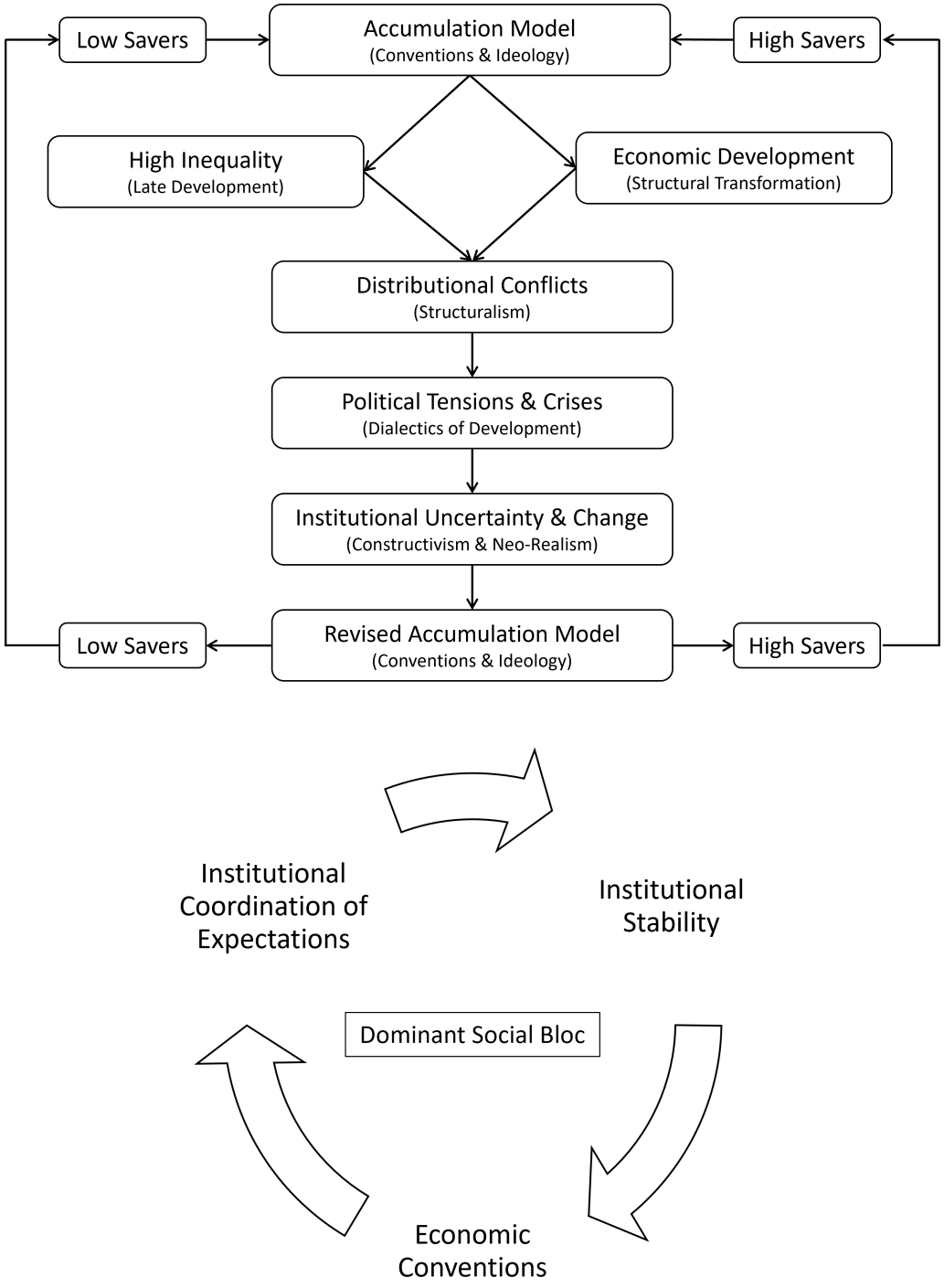
Celso Furtado's structuralist and dialectic approach to development and political change accounts for the late developing context, in which social structures and cultural norms are more rigid than in high-income countries (Furtado, 1964). Contrary to developed countries, rural areas tend to be very unequal due to high land concentration. Moreover, in late-development expectations are higher than in the static context of under-development, with the effect that the population (especially the wealthy) tries to emulate consumption patters from high-income countries. This has a tendency to skew the demand for labor during the development process. The chain of cumulative pressures from structural change in the mode and techniques of production in this context means that the endogenous social conflicts arising out of this process are unlikely to be a source of consensual institutional renovation. On the contrary they are likely to be a source of political tensions and institutional uncertainty.

Furtado argues, using the experience of Brazil's own development, that any hope for consensus is co-opted by opposing movements seeking to push through their ideas of development. Either political leaders will seek to overcome a traditional dominant class by applying populist techniques in a regime that uses the popular masses to their advantage, or the dominant classes will resort to conservative factions in civil society and the military to safeguard their share in the total product—or in our framework to revert to the high-savers accumulation model. This dialectic can also be framed as "induced shifting involvements" between a wage-led class and a profit-led class from the effect of distributional changes on economic activity, resembling in essence a Polanyian cycle of "distribution-led" growth (Nikiforos, 2022).

To further unpack these institutional dynamics we resort to the political economy literature on economic conventions and social blocs. When the rate of structural change outpaces the capacity of society to adapt to the distributional changes through its institutions, conflict and instability ensue. These can threaten the preservation of what the neorealist approach to institutional change calls a "dominant social bloc"—a heterogeneous social alliance whose coherence in economic beliefs, expectations and policies are able to find political validation, and thus dominate the ideology and political institutions of the era (Amable and Palombarini, 2009, 2023). For constructivist (or 'ideational') political economy, uncertainty opens up moments of crisis in interpretation, making agents' responses more random and under-determining than their institutional position or material interests would suggest, as agents are unsure of what their interests should be in such contexts (Blyth, 2002).

In the constructivist view, political stabilization is predicated upon shared ideas among agents about how the economy should work and based on them what constitutes their interests. Thus, whether a social bloc comes to be in dominant position, or even coalesce as a bloc in the first place, depends on the strength of their ideas as reducers of uncertainty, coordinators of expectations, and as institutional stabilizers. Their reproduction can be

Figure 2: Theoretical framework of institutional dynamics in late-development



Notes: authors' elaboration based on the dialectics of structuralist economics from Furtado (1964) and Nikiforos (2022), the constructivist theory of institutional political economy from Blyth (2002), and the neorealist theory of institutional change from Amable and Palombarini (2009, 2023). "High Savers" refers to private individuals' high saving propensities, which coincide with the high income class. "Low Savers" refers to individuals with low saving propensities, typically lower income classes, as well as the government when it dis-saves, i.e. runs fiscal deficits. It can also include the rest of the world when it increases its demand for the country's exports, i.e. when it too dis-saves.

sustained from persuasion, custom or (violent) authority, after which they attain conventional status.[13] Institution builders seek economic conventions precisely to coordinate expectations and influence the economy in ways the promote institutional self-reinforcement and stability. Figure 2 summarizes our theoretical model.

Applied to contexts of late development—where conflict takes on a more acute form given the rush to catch up—political stability is more incompatible with a rapid structural transformation program that quickly displaces the inherited social and political hierarchies of the past. In the Brazilian case, we can pinpoint the moments of rupture in the dominant social bloc that correlate with the observed distributional swings and underlying distributional ideas of the development process. The late-1920s, the early-1960s, the early 1980s and the mid-2010s prefigure crisis situations that led to the rupture of the dominant social bloc, and produced counter-movements that sometimes failed (like the counterrevolution of 1932), but more often succeeded (such as the 1964 military coup, 1985 democratic transition, and the 2015 legal impeachment). Section 5 applies the theoretical framework presented in this section to the evidence described in the next section on distributional dynamics over the course of Brazil's late development.

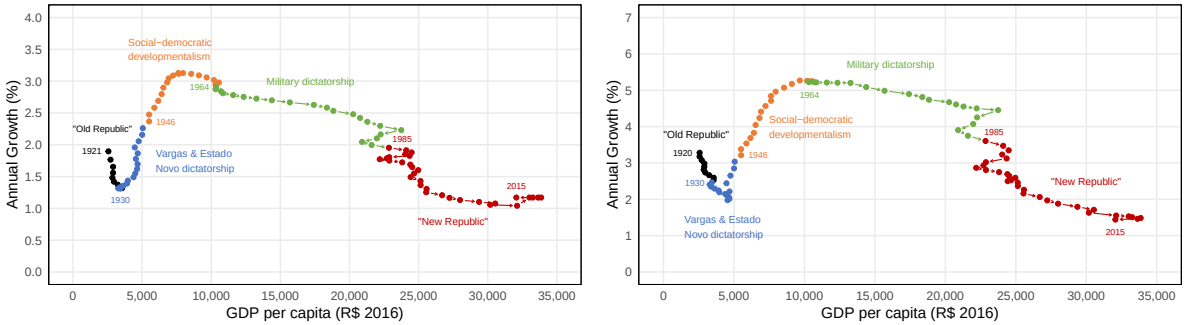
4 From Kuznets Curve to Kuznets Curse

The Kuznets curve is a hypothesis based on a "conjecture of a long secular swing in income inequality" as a country undergoes structural change and transitions to higher levels of economic development. Kuznets relates this swing to "the long swing in other important components of the growth process", such as "the rate of growth of population", "the rate of urbanization", and "the proportions of savings or capital formation to total economic product" (Kuznets, 1955, p. 19). All of these related swings are markers of a country's development path. Mortality falls, births increase, cities become larger, and higher average income permits higher savings and investment, which ultimately reach a point of material and political satiation, limiting the concentrations of population and of savings. Their dynamic is concave, similar to the inverted-U curve characterizing inequality in the income structure. Empirical evidence in Kuznets's time was limited, especially for checking the conjecture in "underdeveloped countries". We begin our analysis by revisiting these claims with the available data we assemble for Brazil over the long run.

Firstly, we find evidence for inverted-U shaped curves in population growth and urbanization as Kuznets hypothesized. Figure 3 plots the relationship between these two variables and

[13] As succinctly put by Frank Hahn and Robert Solow: "The way the economy actually does work can depend on the way agents believe the economy to work [and] the way the economy responds to a policy move by the government can depend on the interpretation that other agents place on it, and therefore on the beliefs about the way things work" (Hahn and Solow, 1995, p. 150).

Figure 3: Population and urbanization Kuznets curves



(a) Population growth vs GDP per capita **(b)** Urban population growth vs GDP per capita

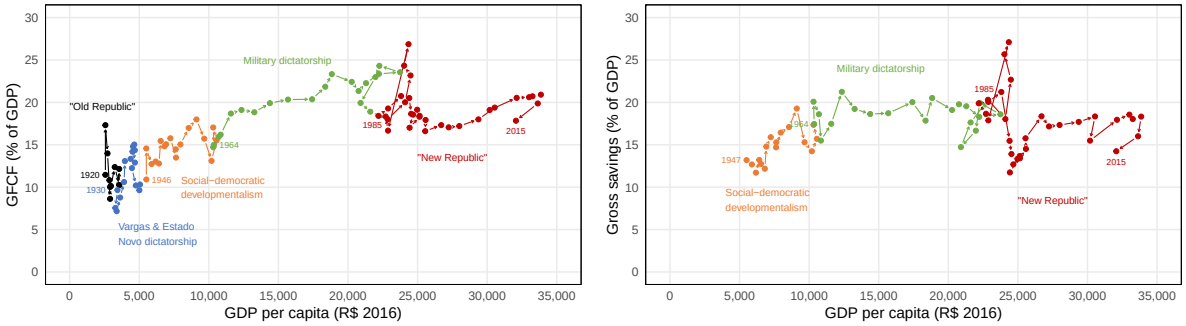
Notes: authors' calculations using data from IBGE (2006, 2017).

GDP per capita across the five recognized political eras in the Brazilian historiography, from the oligarchic "Old Republic" (up to 1930) to the "revolution" of 1930 that brought Getúlio Vargas to power and his *Estado Novo* dictatorship (1937-1945), to the era of social-democratic developmentalism (1945-1964), the military dictatorship (1964-1985), and finally to the era of the democratic "New Republic" (from 1988). For both the total population and the urban population, as the country becomes richer, the emerging pattern of an inverted-U adheres to the logic exposed by Kuznets, with "the upward phase represented by acceleration in the rate of growth ... and the downward phase represented by a shrinking in the rate of growth..." (Kuznets, 1955, p.19).

Turning to savings and investment, the evidence for a Kuznetsian long swing is less pronounced, even if it does confirm an acceleration and deceleration dynamic. Figure 4 shows that investment (gross fixed capital formation) increases from 10-15 percent of GDP in the early eras, to 15-20 percent in the crossover between the era of social-democratic development and military dictatorship, to 20-25 percent during the 1970s and 1980s of the regime and also the early "New Republic", to eventually decline to 15-20 percent at the highest levels of per capita GDP. A similar trend appears for gross savings (with data only available since 1947), with more of a plateau during the military dictatorship.

How to read the relation between savings and investment is important, as we elaborate further below. "[I]f the concentration of savings has a cumulative effect" on concentrating "income-yielding assets in the hands of the upper groups" (Kuznets, 1955, pp. 7-8), then barring political interventions that affect the value of accumulated property or the yield on this property, income concentration in upper groups will be a feature of capitalist development, as also noted by Lewis (1954). The lack of a stronger downward swing in the data may be explained by the renovation of accumulating assets from older to newer industries in a dynamic late developing economy yet to reach full industrial maturity.

Figure 4: Investment and savings Kuznets curves



(a) Gross investment vs GDP per capita

(b) Gross savings vs GDP per capita

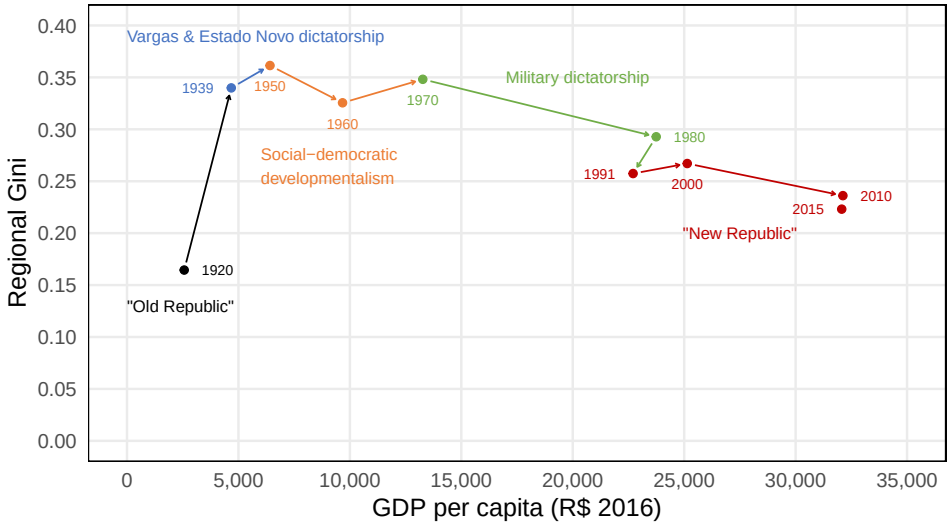
Notes: authors' calculations using data from IBGE (2006, 2017). Investment and savings cover both private and public sectors.

The size of accumulated savings is industry specific and thus regionally specific. This implies that spatial inequality should be affected by the structural change propelled by capitalist development. Spatial inequality plays a part in Kuznets's analysis through the "well established" fact "for this country [the United States] by states, and for many other countries" that average income and its dispersion in rural areas are both lower than in urban areas, which concentrate more productive activities operating under economies of scale (Kuznets, 1955, pp. 7-8). Hence, the expansion of urban sectors should increase the overall size distribution of income as well as the spatial inequality between regions, unless political factors counteract the tendency. Figure 5 plots the empirical evidence for the latter trend, using available regional inequality estimates among Brazilian federal states. An inverted-U pattern is broadly evident, with rising between-state inequality during the period of economic expansion in the 1930s—which concentrated production in Southeastern states—followed by relative stability in subsequent decades and a secular decline beginning from the military dictatorship.[14]

However, Brazil deviates from the Kuznetsian process in that rural areas were very unequal, sometimes more than urban areas, due to high land concentration (Hoffmann and Ney, 2010). Moreover, the statistics shown in Figure 5 are of inequality between states, which comprise both rural hinterlands and urban metropolises, even in the Southeast. Therefore, compositional shifts across rural-urban sectors would not be enough to explain the dynamics, especially given the slow down in urbanization rates over the 1920s and 1930s (see Figure 3b). Higher spatial inequality could be due to factors favoring both rural and urban areas at least over the first few decades (more on this below). Interestingly, the sustained fall in spatial inequality occurs during periods of intense industrialization and growth (1970-1980) and de-industrialization (1991-2015). This suggests counteracting forces affecting the cumulative

[14] This pattern can be approximated by the ratio of per capita GDP in the two most populous and economically contrasting regions—the nine Northeastern states to the four Southeastern states, as Figure A.3 in Appendix A shows.

Figure 5: Regional inequality Kuznets curve



Notes: regional Gini corresponds to population-weighted Gini among Brazilian states. Authors' illustration based on data from Bucciferro and Souza (2020).

effect of the concentration of growth in richer regions and the relative convergence of poorer, more agricultural regions, which goes in line with the empirical results of Ferraz et al. (2024) for local political concentration and regional convergence in post-1960 Brazil.

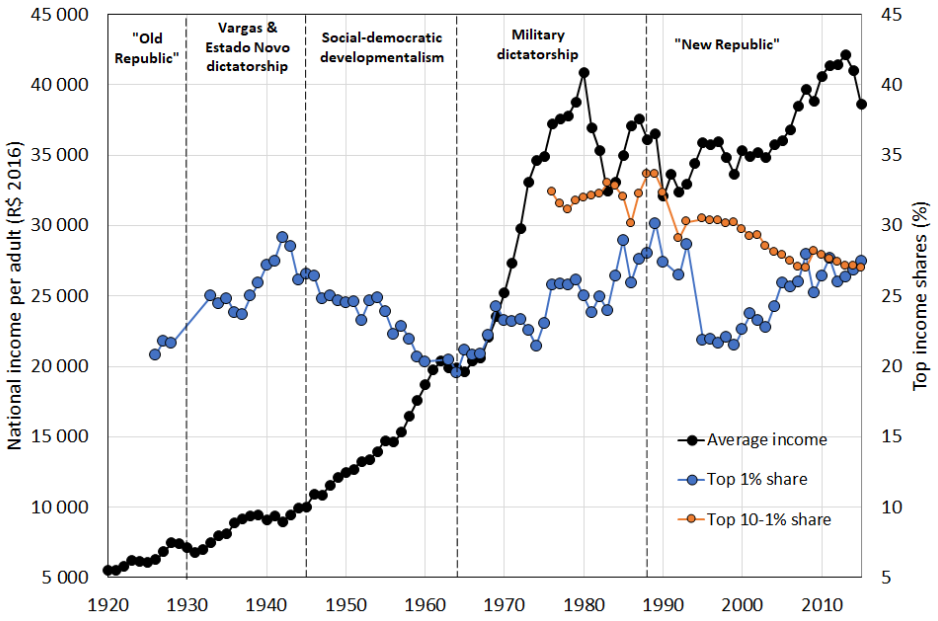
Given all these preceding trends, one may expect the individual distribution of income to follow a similar inverted-U evolution. Following Kuznets's approach we compute shares of national income and compare them to the growth of average national income. Figure 6 plots the evolution of average income and top income shares across the five eras since 1920. Shown are our estimates for the Top 1% income share since 1926 and the Top 10-1% income share since 1976.[15] The share of national income attributed to the richest 1% of the Brazilian population has fluctuated between 20% and 30%, meaning that on average an individual in this top group receives 20-30 times more income than the average person from the proceeds of production. More interestingly, trends in this share seem to correlate with different political eras.[16]

Inequality—measured by this concentration ratio—increased from the "Old Republic" into the Vargas regimes, at the same time as average incomes appear to be falling around the time of the Great Depression. The premature deindustrialization from the mid-1920s is reversed in the Vargas era, which kick-started industrial expansion (see Figure 1b). Concentration increased in a period of slower growth that coincides with Vargas's self-coup in 1937 that establishes the *Estado Novo* dictatorship. Top shares then fell as growth resumed halfway through the Second World War, and the transition to an electoral democracy paved the

[15] The addition of both shares by definition result in the Top 10% income share, that is, the share of national income received by the richest decile in the adult population.

[16] A rising share indicates by definition that the average income of the group is growing faster than the average income of the whole population, a falling share indicates the opposite.

Figure 6: Top income shares and average income

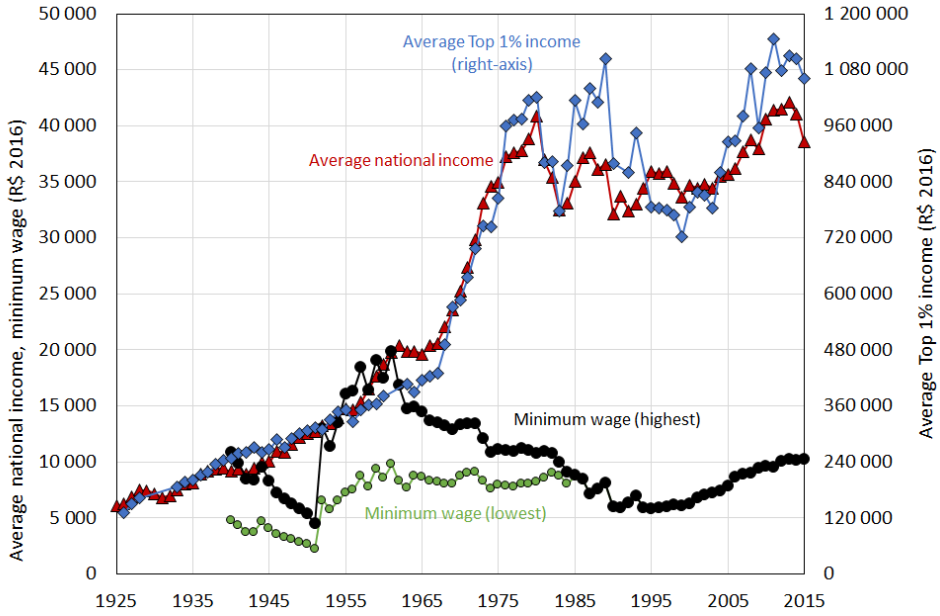


Notes: Distribution of pre-tax national income among equal-split adults. The unit of observation is the adult individual (20-year-old and over; income of married couples is split equally). Fractiles are defined relative to the total number of adult individuals in the population. Authors' calculations (combining survey, tax and national accounts data). Dotted lines mark the time-span of political eras.

way for the era of social-democratic developmentalism—a period seeing growing political participation, social-democratic parties and labor movements, coupled with an active policy of demand-led import-substitution industrialization (ISI). Top shares continued their downward swing, growing slower than average and minimum (urban) incomes (see Figure 7), particularly during the Juscelino Kubitschek presidency (1956-1961), with industry and manufacturing value added growing at their highest average annual rates (see Figure 1b). Top shares reached their trough the year of the coup that brought the military to power after an intense period of inflation, economic crisis and political tension that marked the labor presidency of João Goulart (1961-1964).

The "economic miracle" of the military dictatorship from 1967 to 1980 coincided with a rising (and volatile), trend in the Top 1% share, which recovered all the gains it had lost in the previous two decades. This was largely facilitated by the government's wage squeeze policy, which created a permanent wedge between real wages and productivity (Figure 8). The stagflation and crisis after 1979 fueled the transition to a new democratic settlement, at a time when industry and manufacturing's share in value added was never higher, at 48% and 34% respectively (Figure 1b). The transition was followed by multiple (failed) stabilization plans to quell the rampant hyperinflation, the side-effect of which was the de-industrialization of the economy, further propelled by the currency crises of the late-1980s and late-1990s. Price stabilization finally came after 1994 with the *Plano Real*, a plan which created the

Figure 7: Evolution of average top income, average national income and minimum wages



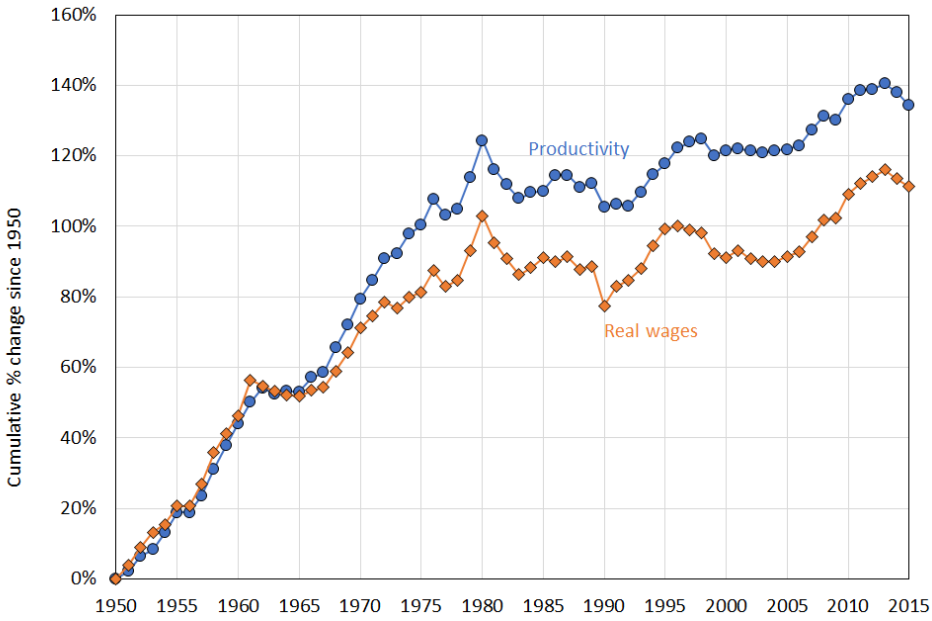
Notes: Average Top 1% income relates to distribution of pre-tax national among equal-split adults across income concepts. Authors' calculations (combining survey, tax and national accounts data). Average total income corresponds to national income per adult. Minimum wage data is from the Ministry of labor and Employment (MTE). The first minimum wages were introduced in urban areas at the state-district-level. A minimum wage for rural workers was introduced in 1963. The national minimum wage was introduced in 1984. Before 1984 the series reports the highest state-level minimum wage observed in the country (the Federal District of Rio de Janeiro (city) until 1961, then Rio city and the new Federal District, Brasilia, until 1964, then the two alongside São Paulo city until 1984). The lowest minimum wage corresponds to the district average of the state of Maranhão in the Northeast, also the state with the highest land concentration in the country (Hoffmann and Ney, 2010, Table 7). All incomes are deflated by the GDP deflator from IBGE.

current currency (the Brazilian "real"), initially anchored to the US Dollar, and pursued orthodox monetary policy and the complete de-indexation of wage and financial contracts. The effect of this incomes policy is shown in the sharp downward revision of the Top 1% share.[17] Interestingly, following the stabilization, and between the start and the end of the Worker's Party governments (2003-2015), we find that growth was very unevenly shared among the Top 10%, with the Top 10-1%—the "upper-middle class"—experiencing below average growth rates, compared to the above-average growth rate of Top 1% incomes, as shown in Figure 6.

Figure 9 summarizes this history through a Kuznetsian lens. Over the long-run of Brazilian development, the evidence for an inverted-U curve is mixed, and complicated. However, the advantage of highlighting the different political regimes is that it reveals phases where the Kuznets pattern appears to be confirmed. This is the case most emphatically during the period in which the country quadrupled its average income to reach R$ 20,000 by the mid-1960s (about a third of US average income at PPP), a pathway that Firpo et al. (2022) identify as "upgrading industrialization" (increasing shares of manufacturing in employment and value-

[17] The noise produced during the period of hyperinflation between the late 1980s and early 1990s should be taken with caution, even if there is policy-related evidence for declining concentration, as we explain below.

Figure 8: Evolution of productivity versus real wages



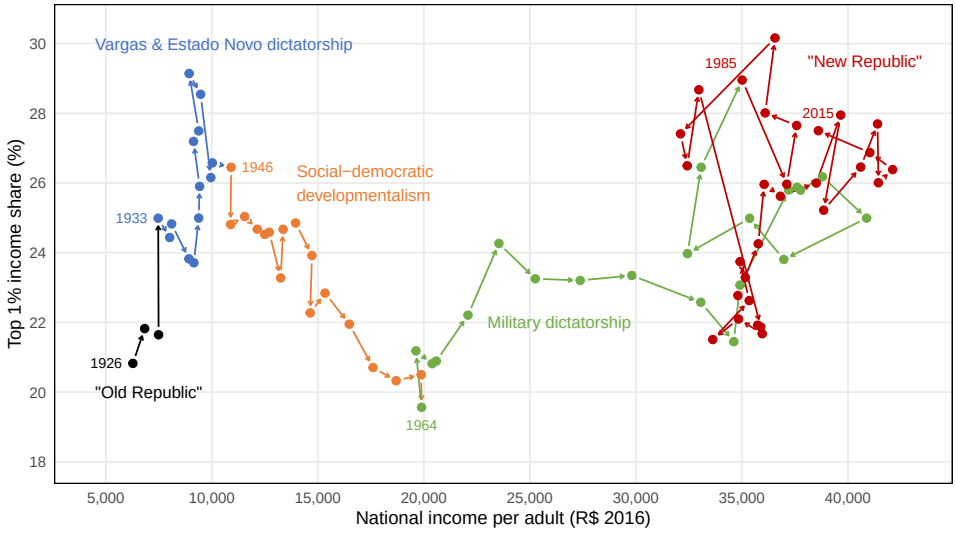
Notes: The graph shows the cumulative percentage change in productivity and real wages since 1950. Author's computations using various sources. Productivity is defined as GDP per employed worker using data from IBGE (2006, 2017). Real wages correspond to total labor compensation per worker, using labor income from Figure 10 and employment data from The Conference Board Total Economy Database. All incomes are deflated by the GDP deflator from IBGE.

added). The swing around the R$ 10,000 average income mark is notable for its relatively symmetric trend and its transition between regimes. If the existence of a Kuznets curve is to be argued in Brazil, the period between the Old Republic and the Military dictatorship is the most obvious candidate. The subsequent phase of Brazilian development is more complicated. The inverted swing during the early years of the military dictatorship is followed by a plateauing until the years of high macroeconomic instability that converges around an average income of R$ 35,000 (which corresponds to half of US average income around 1980).

In the latter period there is no clear Kuznets curve pattern, nor structural swing between political regimes. The increasing trend of income concentration is not accompanied by strong growth gains, rather its volatility is a product of the inflationary and currency crises that hampered growth during the period. Nor is the premature downward swing during the new constitutional period after 1988 sustained to any significant degree. If anything, the cycle of the latter years of the dictatorship seems to be repeated after stabilization in the mid-1990s, when growth resumes largely to the benefit of the richest 1%. However, these trends accompanied real gains sustained for poorer segments of the population that the new 1988 constitution brought—material conditions related to social spending provisions (Bengtsson and Morgan, 2022), and economic rights that were to become effective post-stabilization with the return of minimum wage growth (see Figure A.5)

A crude interpretation of our results would suggest a tainted Kuznets curve hypothesis. But

Figure 9: Income concentration Kuznets curve



Notes: authors' calculations combining the Top 1% share from and national income per capita from Figure 6).

a more nuanced assessment would qualify the dynamics exactly how Kuznets thought about them—a reading we suggest has received too little attention. What our estimates show is that the hypothesis of an inverted-U pattern in the <distribution-development> space over the long run confirms Kuznets's reasoning about underdeveloped societies engaging in late development. The political strain and potential reactionary swings that such rapid capitalist development produces, from structural transformations that compel change in multiple domains of social life, in an already highly unequal setting, defines a 'Kuznets curse'.

In the "developer's dilemma" framework of Alisjahbana et al. (2022) this curse is an outcome of the "Kuznetsian tension" between growth-enhancing structural transformation and the unequal distribution of its benefits, which can take multiple forms. We see it in operation before 1945 and again in the 1960s in Brazil, when social conflict endogenous to rapid structural change is resolved in authoritarian regimes that ensure the maintenance of, or the reversion to, the inequality-enhancing accumulation model. Applying the developer's dilemma framework to the Brazilian case Firpo et al. (2022) conclude that the Kuznetsian tension is strong in the earlier years of the military dictatorship (1964-1972), and either weak or ambiguous thereafter, using survey-based inequality data only available from 1964. This suggests that governments from this period prioritized structural change over inclusive growth initially, before reducing the tension over time until its displacement by strong "secular deindustrialization" (Firpo et al., 2022, pp. 222-24).[18]

In our view, this narrative fails to explain the logic behind the tension, which we attribute to the Kuznets curse. It is important to note that this curse operates distinctly for each of the

[18]The authors date this deindustrialization from 1964, whereas we identify it after the 1980s (see Figure 1b).

two authoritarian eras: Vargas's *Estado Novo* dictatorship is the result of conflict around rising income concentration, while the later military dictatorship is the outcome of conflict around declining income concentration. To suggest that the former exemplifies "strong Kuznetsian tension", while the latter "weak Kuznetsian tension", according to the schema of Alisjahbana et al. (2022), unduly downplays the importance of the second type of conflict. We argue it holds the key to the Brazilian experience, and quite probably to similar late-developing cases.

Moreover, the dynamics of income inequality presented in Firpo et al. (2022, Figure 10.1) point towards a general Kuznets inverted-U swing, even if the authors are not explicit about it. This interpretation is made explicit in Gómez León (2021), who in combining data from social tables and household surveys concludes that "[inequality] followed a traditional Kuznets curve" in Brazil between the nineteenth century and the twenty-first century (p. 39). The use of Gini indices from this type of data—similar to the estimates used by Firpo et al. (2022)—mask an identification of the Kuznets curse, as they do not reveal any of the significant swings in inequality occurring prior to the 1970s, and oversimplify the downward swing of the latter two decades.[19] The Gini is problematic in and of itself: even with more comprehensive macro and micro data, the indicator shows inconclusive Kuznetsian patterns, as Figure A.4 in Appendix A shows.

There are two further analytical weakness brought about by the use and interpretation of survey-based data. An example is the claim that high relative inequality in Brazil is *not* rooted in the colonial 19th century, but rather is a 20th century phenomenon linked to the rise of the urban middle class in the 1920s (Gómez León, 2019), and then more significantly to the effects of active industrial policy after 1945. The early rise in inequality is convincingly associated by the author to the demographic model in Lewis (1954), where the Gini positively correlates with population density, suggesting an elastic supply of labor from rural areas into modern urban sectors where incomes are higher and more dispersed, a point shared by Kuznets (1955, pp. 7-8). The key difference is that for Lewis, urban wages—which are kept low by the 'reserve army' of traditional sector workers—do not rise with productivity in the modern sector, allowing the urban employers to capture all of the value-added surplus. Evidence for the emergence of excess labor, especially in the countryside, during the 1930s in Brazil is shown in Figure 3, while the increase in regional inequality is the highest on record (Figure 5). However, Gómez León (2021) rightly adds the "authoritarian industrial relations policies" of the *Estado Novo* regime (1937-1945) as an important institutional feature for the capitalist surplus. These comprised rigid wage discipline and extended working shifts, especially during the war years (Paoli, 1989; Gomes, 2005), which combined with the wartime restrictions in international trade, allowed the regime to pursue profit-led growth (Souza, 2018).

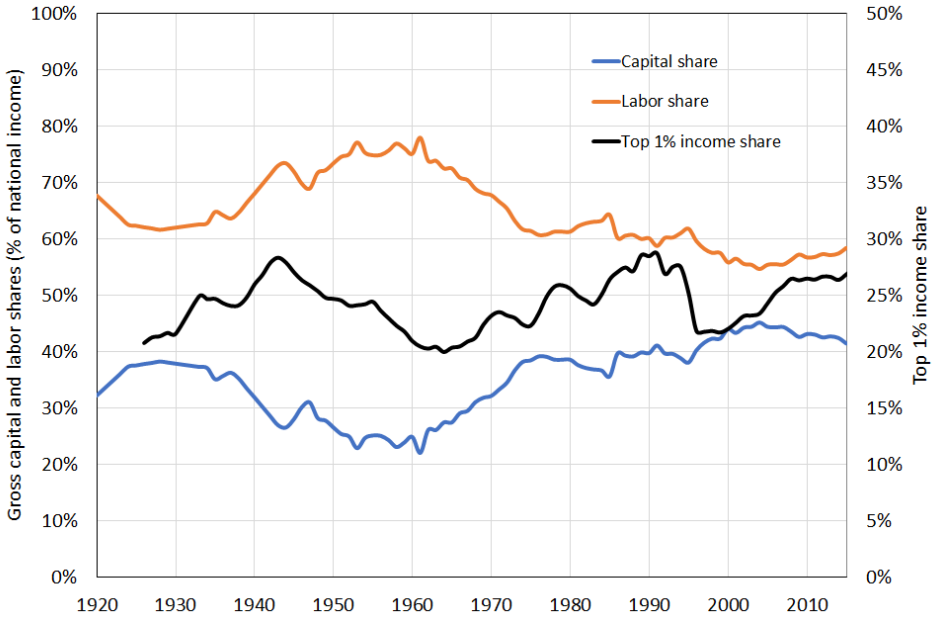
[19] Gómez León (2021) acknowledges the limitations with interpreting the level of inequality, given the lack of within-group income dispersion in social tables and the coverage problems of top incomes, which are also present in survey data. Yet, even a focus on trends, which is the correct one in a Kuznetsian sense, does not overcome the limits of the data, as our estimates help to indicate.

The first critique that can be made is that the use of a single Gini index to represent inequality dynamics fails to properly evaluate these claims, which are internally consistent. When confronted with evidence on other indicators that we have been able to assemble the external validity of the aforementioned analysis is challenged. Figure 10 plots our Top 1% share estimates alongside estimates of factor shares in the same national income. In the Vargas era (1930-1945), concentration of growth among the richest 1% incomes increases by six percentage points, with a notable rise during the Second World Ward. This is positively correlated to a similar percentage rise in the labor share, which implies that either wages and/or wage earners (including top salaries) were growing faster than profits and/or profit recipients on average during the period. This suggests that between-group inequality was probably more important than within-group inequality to explain overall concentration dynamics. This is confirmed by the grouped-Gini estimates for Brazil from dynamic social tables by Astorga (2024), in which the remuneration of the top occupational group (receiving labour and property income) appears to be pulling away from the rest, as wage dispersion among the bottom three groups is declining.

In Kuznets's model, not only is inequality higher in the capitalist sector than in the traditional sector, but real wages rise with productivity growth in the modern sector for higher-skilled workers and white-collar managers and professionals in high demand (contrary to Lewis's model), conditional on institutional features facilitating it. From the historical records we know that the urban workforce in Brazil grew by 36% (1.8 million workers) between 1938 and 1953, while the number of urban unionized workers grew by 135%, thus accounting for 30% of the overall growth of urban workers. Moreover, the number of unionized liberal professionals and urban employers more than doubled and trebled, respectively (IBGE, 2006; IBGE, 2017). Unfortunately, there is no data for the remainder of the 1930s and the 1940s. Figure 3b, suggests that the urban population growth was stronger in the 1940s than in the 1930s, while Figure 7 suggests that urban minimum wages increased somewhat in real terms between 1942 and 1944, only to rise more significantly after 1951. These facts indicate the Kuznets mechanism of urban wage growth was the dominant feature only in the 1950s, while urban employment growth and prevailing pay norms were more relevant to explain trends during the Vargas era, thus confirming more of Lewis's intuitions.

The second limitation of analyses based on survey data is an under-appreciation of the rooted mechanisms behind the Kuznets curse. By ascribing the "origins" of Brazilian inequality to the 1920s and 1930s, this interpretation underestimates the influence of past social structures on Kuznetsian dynamics. Rapid industrial expansion on top of pre-modern socio-political foundations can create ripe conditions for a dual (modern-traditional) economy to emerge with structural bottlenecks (Dobb, 1963; Furtado, 1965). These bottlenecks can affect supply chains between the countryside and cities, the distribution of employment and skills, the size of the domestic consumer goods market, and path-dependent pay norms determining wage

Figure 10: Factor shares and Top 1% shares in national income



Notes: Factors shares in national income. Net shares are after deduction of capital depreciation. Authors' estimates for 2000-2015 using data from IBGE (2017). We divide mixed income between labor and capital according to a 70–30 split. Pre-2000 estimates are anchored to the annual change in the labor share computed by Frankema (2010) for Brazil. Top 1% shares are 3-year moving averages of the shares shown in Figure 6.

ratios between urban and rural sectors. These imbalances can fuel explosive inflation, and were thus identified by the ideology of Brazilian political elites—particularly during the 1950s and 1960s when prices were trending upwards—to be critical to address. We argue that it is in the proposed ways to address these imbalances that the dynamics of the Kuznets curve mutates into a curse for late developing economies like Brazil's.

5 The Political Economy of the Kuznets Curse

The rapid and unprecedented rise of a middle class in Brazil in the 1920s, as documented by Gómez León (2019), set off a sequence of forces that can be explained with reference to a combined constructivist and neorealist account of institutional change. A consolidating socio-economic group around commercial, liberal and civil service workers with comparable wages aligned their public policy expectations around a socio-political group. They became a united social bloc by the end of the decade, pushing economic conventions and institutional changes in the following decade to further transform the socio-economic structure in their expected direction. The 1930 revolution that brought Gétulio Vargas to power exemplifies this dynamic. Its course was marred by economic difficulties and social instability from the start, with the 1929-1932 global crisis and the backlash of traditional landed elites, specifically interest groups from the coffee sector (the country's main export commodity). That the transition to a new dominant social bloc was frustrated by the continued power of coffee producers is exemplified

by the failed counter-revolution attempt in 1932 on Vargas's government (Furtado, 1965). Importantly, this threat along with the collapse in commodity trade during the Depression, led to a macroeconomic policy package centered on coffee price control schemes, a *de facto* basic income for coffee producers (Wickizer, 1943).[20]

This policy could have frustrated the aspiring urban social bloc, but instead it kick-started industrialization in their favor. As Furtado (1965, p. 257) notes: "Industrialisation in Brazil thus was a by-product of measures taken to favour the traditional agricultural export-economy". Initially, this arose from the price control schemes of the 1930s depreciating the currency and making important substitution for home consumer goods profitable, and then from the high exchange rate policy of the 1940s and adverse trade balance spurring industrial protection and growth. Critically, "industrialisation produced important repercussions within those institutions upon which the traditional system of power was based" (ibid).

Merging Furtado's dialectic approach with the constructivist and neorealist theories of institutional change (see Figure 2), we argue that this form of development contained the seeds of its future instability. The expectations among socio-economic groups with different ideas about development and their own interests, particularly around moments of tension and crisis, became less compatible over time, leading to rising conflict among socio-political groups that manifested itself in the institutional breakdown of 1962-1964. This also implies that between 1946 and 1964 no dominant social bloc emerged with sufficient support that could produce stable institutional outcomes from widely held conventions about the distributional aspects of the development process. This can be partly explained by the "lack of an ideologically inspired and politically active industrial class" that would have updated the political constitution of the country (Furtado, 1965, p. 259), and by the emergence of "a mass society" and a populist politics that had difficulties devising a program of institutional change favoring national development (ibid, p. 263). The political and institutional swing in 1964 marked the end of the only clear inverted-U pattern in Brazil's modern history, and validates the conceptual salience of the Kuznets curse.

In the post-war Brazilian context, the legitimacy of a development policy that began to question the private high-savers accumulation model struggled to consolidate into a dominant social bloc. This struggle essentially constituted, what Kuznets identified as "a re-evaluation of the need for income inequalities as a source of savings for economic growth" Kuznets (1955, p. 9). The re-evaluation by the aspiring social bloc was based on the search by for a broadly supported strategy and narrative of how to reach the next stage of development most effectively and equitably. The 1962-1964 crisis, we argue, emerged from incompatible

[20]Over the decade Brazilian authorities, through newly established *autarquias*, burned between 60 and 80 million bags of coffee, corresponding to 28.5% of national production, and 2.5 years of world consumption, to defend coffee prices. It is not inconceivable that in this environment coffee elites may have shrunk in number, but those that remained benefited from the policies, contributing to both the rising top 1% income share as well as to the fall in the capital share shown in Figure 10.

and thus highly conflicting interpretations of the distributional implications of development policy. These interpretations were shaped by political discourse and debate. The history of the *questão social* ("social question") in Brazilian politics illustrates this conflict of interpretation between competing social blocs. The question revolved around what it meant to achieve inclusive growth, and specifically how the rights and responsibilities of labour (versus capital) were framed.

In 1920, after multiple years of rising worker mobilizations, the last president of the "Old Republic", Washington Luís (1926-1930) declared that "labor unrest is a question that concerns public order more than social order" (quoted in Magano (1995, p. 51)), a statement that blatantly ignores Furtado's warnings about incomplete social changes. The 1930 revolution brought to power a new socio-political group that elevated the "social question" from a public order problem to a social matter of state in line with the Christian philosophy of distributism and the political philosophy of corporatism. In early writings of his multi-volume *A Nova Polilítica do Brasil*, the leader of this bloc, Gétulio Vargas, drawing on fascist ideologies from Europe, referenced the cooperation between capital, labor and the state as one collective "family", and that contrary to ideas of the previous dominant social bloc, the "best way to guarantee [a support and attraction of capital] is to transform the proletariat into an organic force of cooperation with the State and not to leave it, by abandoning the law, at the mercy of the dissolving action of disturbing elements" (Vargas, 1932, pp. 97-98).

According to Oliveira Vianna, the legal scholar responsible for the new labour laws enacted by Vargas in 1943, which quickly followed the passing of urban minimum wage laws in 1940, the social question would be addressed with labor legislation promoting "harmony and collaboration" (Vianna, 1951, p. 11).[21] However, faced with intensifying macroeconomic imbalances from trying to appease the primary commodity sector, and inflationary pressures that were eroding real minimum wages and his support base among urban workers, Vargas became more radical in his pronouncements. Anticipating the end of the exceptional wartime restrictions on international trade, and also his *Estado Novo* dictatorship, he proclaimed in his 1944 Labor Day speech that "liberty, in the strict sense of political franchising, is not enough to solve the complex social question [...] Supporting workers economically is tantamount to giving them the true sense of freedom and security to express their political opinions. And for this, it is urgent to correct the imbalance between those who find no limits in the profitable exploitation of the means of production and those who toil in a permanent state of necessity, without resources to acquire what is indispensable for survival" (Vargas, 1951, p. 291).

In 1945 Vargas was removed from power by the military (who feared continued "populism"), and in 1946 a new democratic constitution was adopted. In the same year Vargas announced the passing of the "old liberal and capitalist democracy", which was "founded on inequality",

[21] Thus, consistent with the new administration's appeals to large landowners, the post-1930 social bloc excluded rural workers, which comprised the bulk of the population.

and the coming of "a socialist democracy, a workers' democracy" (quoted in Skidmore (1976, p. 107)). This may seem an opportunist declaration from a politician seeking to reinvent himself for the democratic age and who had recently founded two new political parties for this new era—the geographically heterogeneous Social Democratic Party (PSD) and the more urban Brazilian Labor Party (PTB).[22] And yet, it adheres precisely to the dilemma of development policy between alternative modes of production that Dobb (1963) believed faced all underdeveloped countries.

The heritage of this type of political maneuvering during the 1950s was a heavier emphasis on state involvement in economic development to resolve "backwardness and maladjustments of the economic infrastructure", according to Juscelino Kubitschek, Brazilian (PSD) president from 1956 to 1961 (Kubitschek, 1956, p. 146). Central to these bottlenecks was the latifundist rural property regime and its "concentration of productive land" that characterized the traditional agricultural economy. "Progressive industrialization" required "a solid agricultural base and an expanding internal market" (Kubitschek, 1956, p. 152), as well as the continued collaboration between labour, capital and the state in a corporatist foil.

In this evolving national narrative, workers would be protected from exploitation by legally-defined contracts, ability to join unions, sectoral wage bargaining, and social security, in exchange for cooperation in wage demands, while capitalists would get subsidized profits from state investment, in exchange for avoiding conspicuous consumption and re-investing their savings into productive outlets. As Kubitschek noted: "The austerity of spending or consumption by the most privileged classes is not only an essential condition for capital accumulation and an example for the classes that ascend the social ladder; it is also a political objective capable of strengthening the doctrine of freedom and private initiative" (Kubitschek, 1956, p. 276). The opposite would "be a ferment of class struggles when taken to extremes, which are frequent in less developed countries" (ibid)—an ode to the tensions inherent in the Kuznets curse.

In the Kubitschek era the high-savers accumulation model of structural transformation became more obsolete with political and technocratic conventions developing around state-led industrial polices: "The cumulative concentration of resources, in the form of reproductive investments, has shown itself, however, to be a slow process and often marked by undeniable social injustices. State intervention, aimed at provoking the acceleration of reproductive investments and creating an austere discipline of consumption, becomes a logical imposition in regions that, like Brazil, are today in the initial phase of the process of economic development" (Kubitschek, 1956, p. 276). In practice, the austerity was pushed from a mix of public media rhetoric and increased taxation of upper incomes and consumption of goods and services (Bengtsson and

[22]Both parties dominated the congress over the next twenty years, concentrating more than half of all congressional seats (Bengtsson and Morgan, 2022).

Morgan, 2022).[23]

There was thus the recognition among PSD and PTB officials that under the supply problems of late development, a part of demand coming from consumption should be curtailed to make (real resource) space for investment. The redistribution of income was pushed by structuralist economists working for the government, such as Furtado himself (Furtado, 1969). However, the inflation constraint highlighted the importance of how the squeeze on consumption was to be achieved. Wages could be subject to smaller nominal increases or face cuts, but this is distributively more regressive than curbing conspicuous consumption by upper income groups through increasing taxes and persistent public rhetoric. The chosen option was to allow for strong wage growth to propel internal demand as an outlet for industrial goods without major tax or land reforms.

The improvements in material living standards for workers (mainly in cities) was also justified as the most effective way to avert the communist mode of production (Kubitschek, 1957, pp. 115-16). The 1950s saw the the strongest growth in real wages, as shown in Figure 7. But as is shown in Figure 8, policymakers were taking this strategy to the limit, which the government seemed to have acknowledged: "The most serious of the immediate problems was inflation [...] There is no doubt about the legitimacy of the reasons that lead to demands for better wage levels. It is worth remembering that granting increases, especially in proportions greater than the possibilities of redistributing the country's income, constitutes a powerful factor in making life more expensive, both due to the increase in production costs and the general expansion of the demand for goods and services in conditions of inelastic supply" (Kubitschek, 1957, pp. 126-27).

The supply problem was the reason the government focused on its large state investment program (the *Plano de Metas*). Public investment increased by 123% during Kubitschek's presidency, while manufacturing value-added expanded by 97%, outpacing growth of services and agriculture. Formal employment registers made by the Ministry of Labour and Social Insurance increased by close to 70% during the 1950s, as the urban share of the population increased from 36% to 45% (IBGE, 2017). In a coordinated effort to promote "progressive industrialization", the government's policies paved the way for further institutional changes, which would be the cause of great tension.

The rise of the urban population came with unionization growth of 77% between 1953 and 1963, with union density reaching 40% of industrial and public sector workers. Wages grew fastest in the more urban-dense regions of the south and southeast (see Figure A.2). These regions also concentrated regional union density, with the southeast alone comprising three-quarters of all union members during this period (IBGE, 2006). Rising inflation during the 1950-1960 period

[23] In 1947 the top marginal personal income tax rate increased from 20% to 50%, increasing further to 60% in 1961 and 65% in 1962 under the PTB executive. Consumption taxes were the fastest growing tax over the two decades, increasing from 5% of GDP in 1940 to almost 10% in 1960.

was not only a sign of the growing imbalance in the Brazilian economy. It also divided social groups, as it became impossible to accommodate large scale redistribution with high public investment rates in heavy industry, subsidies for preferential imports, continued monetary financing of coffee surpluses to maintain international prices and valuable foreign exchange, and interventions to keep costs of public utilities low, all the while maintaining low (direct) taxation and public social spending outside of the social security system of pension contributions and transfers.[24]

The conventional form of industrialization pushed in the 1950s (state-subsidized, internal demand-led) was accompanied by a deteriorating current account and balance of payments problems, which were the product of measures sought to quell the rising cost of living. These included a complex system of multiple exchange rates linked to preferential import subsidies and investments into expanding domestic productive capacity. The problem was the incompatibility of incomes policies for rural and urban employers (price or cost subsidization schemes) and those for urban workers (wage indexation) that sought to reconcile external constraints (foreign exchange) and internal constraints (market size, distribution, and inflation). The deterioration in the external accounts compelled the government to enter into a series of requests for IMF support over the 1957-61 period, which led to frustrated arrangements and unilateral withdrawals by the Brazilian authorities (Loureiro, 2017; Oliveira, 2023). The governing bloc ultimately did not want to adopt IMF exchange rate reforms that would worsen the cost of living for its social base, nor compromise on their mandated investment-and-wage-led policy.

By the time João Goulart of the Brazilian Labour Party, and Kubitschek's Vice-President, assumed the presidency during the chaotic year of 1961, inflation had almost trebled from 1958, and wages per worker were outgrowing output per worker by 12%. Private investment declined in real terms over 1960 and 1961, which alongside the winding down of the *Plano de Metas* public investment program, contributed to the economic recession of 1962-1964. IMF negotiations recommenced under the proposed Triennial Plan of price stabilization. However, the governing executive shifted to increasingly "populist" supply-side proposals to ease structural bottlenecks, notably nationalization of oil refineries, strategic land expropriation, rent controls, unionization and a minimum wage for rural workers, and electoral reform to include illiterate adults in the franchise (Skidmore, 1976).

Symptomatic of the rupture of the social alliance of the post-Vargas era, Goulart increasingly politicized the reforms by spurring greater involvement of the labor base in an attempt to consolidate a dominant social bloc and new constitution. Just a few weeks before the military coup that would depose his government and renew IMF relations, he claimed that "the current Constitution [...] is an outdated Constitution, because it legalizes a socio-economic structure

[24]Public spending on education, health, and urban housing/utilities/transport were each below 2% of GDP, and barely increased in real terms over the decade, while social security spending hovered around 4% of GDP (Bengtsson and Morgan, 2022).

that has been surpassed" (Goulart, 1964, p. 82). According to Celso Furtado, who was Minister of Planning in Goulart's government, this socio-economic structure was partly a product of the electoral system that confronted a political legislature, which was more dependent on rural votes and an outdated agricultural economy, with a political executive that was biased towards the urban and modern sectors of the economy (Furtado, 1965).[25]

A key question that defines the Kuznets curse is how far state intervention can go before social consensus and pay norms break down and economic and political instability ensue? The military dictatorship (1964-1985) addressed the stagflationary crisis with an upward redistribution of income, reverting to the high-savers accumulation model, as evidenced from Figures 7 and 8. GDP per capita growth averaged 8% per year over the next ten years. The narrative developed by intellectuals, technocrats and politicians of the regime was that there was a choice between "concentration or low average income" (Kingston and Kingston, 1972, p. 255-56). Roberto Campos, Minister of Planning during the first military administration (1964-1967), echoed this point when arguing in an article in one of the main Brazilian newspapers *O Globo* that in a "capitalistic model of development [...] the acceptance of a high level of income concentration [is] the most rational policy for an underdeveloped country, *needy of savings*" (Campos, 1972, p. 2, emphasis added). According to Mario Simonsen, Minister of Finance during the 1974-1979 administration, the positive relationship between concentration and growth resulted from a long-run evolution of the economy, and that the communist mode of production was the only alternative to this dynamic (Simonsen, 1972, pp. 56-57). These remarks were produced in the context of a publicly debated distributional controversy during the 1970s over whether income inequality had indeed increased and what were the driving factors (Bacha and Taylor, 1978; Andrada and Boianovsky, 2020).

At the center of this debate was Carlos Langoni, a Brazilian economist with a PhD from the University of Chicago, who published an influential book in 1973 that generalized the Kuznetsian market dynamic explanation. This allowed him to exempt the regime's wage policy from having any influence on the distribution. Langoni claimed "that the minimum wage has been declining in real terms since 1961, and that the policy of wage contention initiated in 1965 and 1966, was an appendix to the anti-inflationary policy" (Langoni, 1973, p. 78). Evidence from the data suggests that this was a revisionist account: after 1961 real minimum wages were falling a context of rising inflation, while after 1965 they were falling in a context of falling inflation. The wage policies of 1965 and 1966 not only directly impacted real wages but, as Figure 8 confirms, allowed for the inflation of profits after the resumption of growth from the expansionary fiscal policy post-1967 (Bacha and Taylor, 1978).

[25]While the political executive (the president and state governors) was elected through a majoritarian system by literate citizens—who were more concentrated in urban areas—members of the legislature (the congress) were elected through a proportional representation system. With the majority of the population still residing in rural areas during this period, the literacy condition "made a given vote in a rural congressional district (sometimes with as little as 10 per cent literacy) much more valuable than in the cities" (Love, 1970, p. 22).

In the parlance of the distribution-led growth literature of Kaleckian-Structuralist macroeconomics, the Brazilian economy seemed to be mostly "wage-led" until 1961—driven by the positive correlation between GDP growth and employee compensation—after which it shifted to being "profit-led" until at least the mid-1970s.[26] As framed by Nikiforos (2022), the pursuit of either wage-led (low savers) or profit-led (high savers) growth endogenously arrives at tipping points that shift the economy to the opposite settlement. In capitalist economies these changes depend on the private propensities to invest and save out of profits. The tension between aggregate demand and supply factors was known to opinion and policy makers at the time, as alternative interpretations of the 1961-1964 crisis convey, even among those not on the military side of the debate.

The structural thesis of the crisis, most associated to Furtado, posited that economic inequality was a critical bottleneck to further economic development (Furtado, 1969). Modernizing the agricultural sector and redistributing incomes would avoid problems of internal demand and excess capacity. The cyclical thesis promoted by Serra and Tavares (1971) argued that the crisis was a classic one of investment, in the traditional Keynesian sense of low profit expectations in the context of inflationary wage policy and the expiration of the "Plano de Metas" investment program of the Kubitschek government. While both sides of the debate agreed that incomes were still too highly concentrated to best ration consumption-demand, Tavares and Serra argued that the fall in the profit–wage ratio over time constrained investment from the supply-side. Thus, the solution to the crisis was in taking one of two paths: increasing the profit–wage ratio by repressing labour costs, so that both falling investment and rising inflation could be tackled; or introducing new large public investment programs alongside strict price controls and/or a strong curtailment of upper-income consumption through higher taxes to control inflation. Ultimately, Tavares and Serra acknowledged that economic conventions had shifted towards high savers, allowing a dominant social bloc to emerge after 1964 that united diverse factions of military, business and civil society groups (Skidmore, 1976). The reproduction of their economic conventions, and hence institutional stability, was predicated on violent authority, until economic instability and uncertainty opened up a crisis in the institutional coordination of expectations during the 1980s that undermined a regime suffering from repression fatigue.

6 Conclusion

Writing in exile during the first months of the military dictatorship, Celso Furtado asked whether "a system of power designed to preserve the status quo [can] be conditioned to formulate and pursue a policy of development in a country where development depends on

[26] Figure A.6 in Appendix A illustrates this from the division of GDP into income and expenditure components.

the prior completion of changes in the existing social structure?" (Furtado, 1965, p. 267). Years later in a retrospective review of the debates of this period, another Brazilian economist, Edmar Bacha, wrote that "[g]iven the populist ideological underpinnings of their doctrines, structuralist economists did not acknowledge that authoritarian regimes could succeed in substantially reducing inflationary pressures without impairing growth prospects by rigidly controlling wage earners' claims to higher nominal incomes" (Bacha, 1980, p. 24).

In this paper we have attempted to make sense of these cognitive frames of thought through a novel examination of income distribution and growth in Brazil, following the intuitions of Kuznets (1955) for underdeveloped countries. Overall, we found mixed evidence for Kuznets swings of an inverted-U shape for income, beyond patterns for variables like population growth, urbanization, savings and investment. However, in combining income dynamics with changes in political regimes we revealed the endogeneity of Kuznets swings to political conflict and institutional change, which are themselves endogenous to the pressures of capitalist modernization.

From Kuznets's 1955 article, we have drawn out a 'Kuznets curse', which is the tendency in underdeveloped countries actively engaged in late structural transformation for endogenous social conflict to be resolved in authoritarian regimes that ensure adherence to the high-savers accumulation model. This way of understanding the economy and its growth was contested at different points in time, most notably during the period of social-democratic developmentalism (1945-1964). We argued that this era holds the key to understanding the Kuznets curse given what followed. Its political economy was explored from an innovative synthesis of primary sources of key political actors with contemporary scholarship on economic development and constructivist-neorealist scholarship on institutional change.

The social bloc that was gaining dominance during the 1950s fell into crisis in the early 1960s due to a rupture between social expectations and policy outcomes. During this era, capitalists were compelled to reinvest their high savings into modernizing their production—through public rhetoric and higher personal taxation to minimize their consumption—in exchange for the boost to prices and profits that public subsidization of heavy industry, critical imports and coffee prices was generating. Urban wages grew rapidly—often outpacing productivity—as a way to prop up internal demand and spur further investment in productive capacity. But the redistribution of aggregate demand that was pursued faced mounting contradictions between inflation and the balance of payments. The failure of the post-war social bloc lay in the incompatibility of satisfying contradictory demands of rural and urban employers, urban employees and external creditors, without major structural reforms to the tax system and agricultural sector.

Under the supply constraints of late development, how to expand domestic capacity and demand sufficiently in-tandem to avoid producing inflationary spirals was the problem that the aspiring social bloc of the 1950s struggled with to their detriment. These were the

sort of challenges that developed economies would essentially face two decades later during the stagflationary 1970s (Blyth, 2002). But as Kuznets warned, given that the institutional and political frameworks are more polarized in underdeveloped countries, the same strain to distributional conventions would produce more explosive outcomes. It is precisely in these contexts that the Kuznets curve turns into a curse.

Kuznets would return to this theme at the end of a 1963 paper when commenting that "in evaluating the effects of the size distribution of income on economic growth, the knowledge of the quantitative characteristics of the distribution itself is just a beginning: we need far more knowledge of the economic and social conditions under which the distribution is generated than we now possess. In particular, we need to be aware of the stresses and strains to which income inequalities give rise so that, in concentrating on the purely economic aspects like generation of savings or effective demand, we do not overlook the effects of the cleavages created in the social and political structures that are indispensable for sustained economic growth" (Kuznets, 1963, p. 69). The present paper is a contribution to the development of such knowledge.

References

Alfani, G. (2024). Inequality in history: A long-run view. *Journal of Economic Surveys*, 1–21.

Alisjahbana, A. S., K. Sen, A. Sumner, and A. A. Yusuf (Eds.) (2022, August). *The Developer's Dilemma*. Oxford University Press.

Amable, B. and S. Palombarini (2009). A neorealist approach to institutional change and the diversity of capitalism. *Socio-economic review 7*(1), 123–143.

Amable, B. and S. Palombarini (2023). Multidimensional social conflict and institutional change. *New Political Economy 28*(6), 942–957.

Andrada, A. F. and M. Boianovsky (2020). The political economy of the income distribution controversy in 1970s brazil: debating models and data under military rule. In *Research in the history of economic thought and methodology: Including a Symposium on Economists and Authoritarian Regimes in the 20th Century*, Volume 38, pp. 75–94. Emerald Publishing Limited.

Arroyo Abad, L. and P. Astorga (2017). Latin american earnings inequality in the long run. *Cliometrica 11*(3), 349–374.

Astorga, P. (2024, October). Revealing the diversity and complexity behind long-term income inequality in latin america: 1920-2011. *The Journal of Economic History*.

Bacha, E. L. (1980). Selected issues in post-1964 brazilian economic growth. In L. Taylor, E. L. Bacha, E. A. Cardoso, and F. J. Lysy (Eds.), *Models of Growth and Distribution for Brazil*. Oxford University Press.

Bacha, E. L. and L. Taylor (1978). Brazilian income distribution in the 1960s: Tacts' model results and the controversy. *The Journal of Development Studies 14*(3), 271–297.

Bengtsson, E. and M. Morgan (2022). Does democratization cause redistribution? evidence from sweden and brazil. In *Scandinavia and South America—A Tale of Two Capitalisms: Essays on Comparative Developments in Trade, Industrialisation and Inequality since 1850*, pp. 287–323. Springer.

Bértola, L. and J. Williamson (2017). *Has Latin American inequality changed direction?: Looking over the long run*. Springer.

Blanchet, T., I. Flores, and M. Morgan (2022). The weight of the rich: Improving surveys using tax data. *Journal of Income Inequality 20*(1), 1–32.

Blanchet, T., J. Fournier, and T. Piketty (2022). Generalized pareto curves: Theory and applications. *Review of Income and Wealth 68*(1), 263–288.

Blyth, M. (2002). *Great transformations: Economic Ideas and Institutional Change in the Twentieth Century*. Cambridge University Press.

Bucciferro, J. R. and P. H. Souza (2020). The evolution of regional income inequality in brazil, 1872–2015. *Time and space: Latin american regional development in historical perspective*, 131–156.

Campos, R. (1972). Tempo de balanço ii. *O Globo*, 2.

De Rosa, M., I. Flores, and M. Morgan (2024). More unequal or not as rich? revisiting the latin american exception. *World Development 184*, 106737.

Dobb, M. (1963). *Economic Growth and Underdeveloped Countries*. London: Lawrence and Wishart.

Engerman, S. L. and K. L. Sokoloff (2012). *Economic Development in the Americas since 1500: Endowments and Institutions*. Cambridge University Press.

Ferraz, C., F. Finan, and M. Martinez-Bravo (2024). Political power, elite control, and long-run development: Evidence from brazil. *Journal of the European Economic Association 22*(6), 2870–2908.

FGV (1962). *Contas Nacionais do Brasil, 1947/1961*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística.

Firpo, S., R. Pieri, and R. Nogueira (2022). Inclusive growth without structural transformation? the case of brazil. In A. S. Alisjahbana, K. Sen, A. Sumner, and A. A. Yusuf (Eds.), *The Developer's Dilemma*, pp. 205–226. Oxford University Press.

Frankema, E. (2010). Reconstructing labor income shares in argentina, brazil and mexico, 1870-2000. *Revista de Historia Económica-Journal of Iberian and Latin American Economic History 28*(2), 343–374.

Furtado, C. (1964). *Dialética do desenvolvimento*. Rio de Janeiro: Fundo de Cultura.

Furtado, C. (1965). Political obstacles to economic growth in brazil. *International Affairs 41*(2), 252–266.

Furtado, C. (1969). Desenvolvimento e estagnação na américa latina: Um enfoque estruturalista. *América Latina: Ensayos de Dnterpretación Económica. Santiago: Ed. Universitária*, 120–149.

Gomes, A. C. (2005). *A invenção do trabalhismo* (3^a ed. ed.). Rio de Janeiro: Editora FGV.

Gómez León, M. (2019). The rise of the middle class in brazil, 1850–1950. *European Review of Economic History 23*(4), 482–498.

Gómez León, M. (2021). The kuznets curve in brazil, 1850-2010. *Revista de Historia Economica-Journal of Iberian and Latin American Economic History 39*(1), 37–61.

Goulart, J. (1964). Discurso do presidente joão goulart na central do brasil, rio de janeiro (rj), 13 de março 1964. In W. B. Marcelino (Ed.), *Discursos Selecionados do Presidente João Goulart*, pp. 79–89. Brasília: Fundação Alexandre de Gusmão. 2010.

Hahn, F. and R. Solow (1995). *A Critical Essay on Macroeconomic Theory*. Oxford: Blackwell.

Hirschman, A. O. and M. Rothschild (1973). The changing tolerance for income inequality in the course of economic development: With a mathematical appendix. *The Quarterly Journal of Economics 87*(4), 544–566.

Hoffmann, R. (1988). A subdeclaração dos rendimentos. *Revista São Paulo em Perspectiva 2*(1), 50–54.

Hoffmann, R. and M. G. Ney (2010). Estrutura fundiária e propriedade agrícola no brasil, grandes regiões e unidades da federação. *Brasília: Ministério do Desenvolvimento Agrário*, 108.

IBGE (2000). *Sistema de Contas Nacionais - Brasil, 1995-1999*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística.

IBGE (2006). *Estatísticas do século XX*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística.

IBGE (2017). *Anuário Estatístico do Brasil*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística. (72 volumes; yearly since 1945).

IBGE (2017). *Sistema de Contas Nacionais: Brasil: 2015*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística.

Keynes, J. M. (1919). *The Economic Consequences of the Peace*. 2011 reprint, Digireads.com.

Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*. London: Harcourt Brace [1964].

Kingston, J. and L. Kingston (1972). A distribuição da renda no brasil, 1960-1970. *Revista Brasileira de Economia 26*(4), 241–256.

Kubitschek, J. (1956). Mensagem ao congresso nacional, parte 1.

Kubitschek, J. (1957). Mensagem ao congresso nacional, 1957.

Kuznets, S. (1953). *Shares of Upper Income Groups in Income and Savings*. NBER.

Kuznets, S. (1955). Economic Growth and Income Inequality. *The American Economic Review 45*(1), 1–28.

Kuznets, S. (1963). Quantitative aspects of the economic growth of nations: Viii. distribution of income by size. *Economic Development and Cultural Change 11*(2, Part 2), 1–80.

Langoni, C. (1973). *Distribuição da renda e desenvolvimento economico do Brasil*. Rio de Janeiro: Editora Expressao e Cultura.

Lewis, W. A. (1954). Economic development with unlimited supplies of labour. *The manchester school 22*(2), 139–191.

Lindert, P. H. (1986). Unequal english wealth since 1670. *Journal of Political Economy 94*(6), 1127–1162.

Loureiro, F. P. (2017). *Empresários, Trabalhadores e Grupos de Interesse: A Política Econômica nos Governos Jânio Quadros e João Goulart, 1961–1964*. São Paulo: Editora Unesp.

Love, J. L. (1970). Political participation in brazil, 1881-1969. *Luso-Brazilian Review 7*(2), 3–24.

Magano, O. B. (1995). Washington luís e a questão social. *Revista Da Faculdade De Direito, Universidade De São Paulo 90*, 49–65.

Marglin, S. and A. Bhaduri (1990). Profit squeeze and keynesian theory. In S. Marglin and J. Schor (Eds.), *The Golden Age of Capitalism: Reinterpreting the Postwar Experience*, pp. 153–186. Oxford: Clarendon Press.

Medeiros, M., J. de Castro Galvão, and L. de Azevedo Nazareno (2018). Correcting the underestimation of top incomes: Combining data from income tax reports and the brazilian 2010 census. *Social Indicators Research 135*(1), 233–244.

Medeiros, M., P. H. G. F. Souza, and F. A. d. Castro (2015a). O topo da distribuição de renda no brasil: Primeiras estimativas com dados tributários e comparaçãoo com pesquisas domiciliares (2006-2012). *Dados 58*(1), 7–36.

Medeiros, M., P. H. G. F. Souza, and F. A. d. Castro (2015b). The stability of income inequality in Brazil, 2006–2012: an estimate using income tax data and household surveys. *Ciência & Saúde Coletiva 20*(4), 971–986.

Morgan, M. (2015). Income concentration in a context of late development: an investigation of top incomes in brazil using tax records, 1933-2013. Master's dissertation, Paris School of Economics, Paris.

Morgan, M. (2017). Extreme and Persistent Inequality: New Evidence for Brazil Combining National Accounts, Surveys and Fiscal Data, 2001-2015. WID.world Working Paper 2017/12.

Morgan, M. (2018). *Essays on Income Distribution: Historical, Methodological and Institutional Perspectives*. Phd dissertation in economics, Paris School of Economics, Paris.

Mortara, G. (1949a). Dados e observações sôbre a distribuição das rendas das pessoas físicas contribuintes do impôsto de renda no Brasil. *Revista Brasileira de Estatística 10*(38), 197–222.

Mortara, G. (1949b). Representação analítica das distribuições dos contribuintes e das respectivas rendas líquidas determinadas para a aplicação do impôsto de renda, em função do valor da renda líquida. *Revista Brasileira de Economia 3*(2), 7–34.

Nikiforos, M. (2022). Induced shifting involvements and cycles of growth and distribution. *Cambridge Journal of Economics 46*(1), 73–103.

Nurkse, R. (1953). *Problems of Capital Formation in Underdeveloped Countries*. Oxford: Oxford University Press.

Oliveira, F. C. d. (2023). The IMF as a 'Mantle of Multilateral Anonymity': US-IMF-Brazil Relations, 1956–9. *Cold War History 23*(1), 1–23.

Paoli, M. C. (1989). Trabalhadores e cidadania: experiência do mundo público na história do Brasil moderno. *Estudos Avançados 3*(7), 40–66.

Polanyi, K. (1944). *The Great Transformation: The Political and Economic Origins of Our Time*. Boston: Beacon Press.

Saboia, J. a. (1984). *Evolução histórica do salário mínimo no Brasil: fixação, valor real e diferenciação regional*. Rio de Janeiro: IPEA, Programa Nacional de Pesquisa Econômica.

Schumpeter, Joseph, A. (1942). *Capitalism, Socialism and Democracy*. 2003 Reprint, New York: Routledge.

Serra, J. and M. d. C. Tavares (1971). Além da estagnação: Uma discussão sobre o estilo de desenvolvimento recente do brasil. *En: Cinqüenta anos de pensamento na CEPAL-Rio de Janeiro: Record/CEPAL, 2000-v. 2, p. 589-608*.

Simonsen, M. H. (1972). *Brasil 2002*. Rio de Janeiro: Apec; Edições Bloch.

Skidmore, T. E. (1976). *Brasil: de Get—úlio Vargas a Castelo Branco (1930–1964)*. Rio de Janeiro: Paz e Terra.

Skott, P. (2021). Fiscal policy and structural transformation in developing economies. *Structural Change and Economic Dynamics 56*, 129–140.

Skott, P. (2023). *Structuralist and Behavioral Macroeconomics*. Cambridge: Cambridge University Press.

Souza, P. H. G. F. (2015). A distribuição de renda nas pesquisas domiciliares brasileiras: harmonização e comparação entre Censos, PNADs e POFs. *Revista Brasileira de Estudos de População 32*(1), 165–188.

Souza, P. H. G. F. (2016). *A desigualdade vista do topo: a concentração de renda entre os ricos no Brasil, 1926–2013*. Phd dissertation in sociology, Universidade de Brasília, Brasília.

Souza, P. H. G. F. (2018). A history of inequality: top incomes in brazil, 1926–2015. *Research in Social Stratification and Mobility 57*, 35–45.

Vargas, G. (1932). *A Nova Política do Brasil. Vol. II*. Rio de Janeiro: José Olímpio.

Vargas, G. (1951). *A Nova Política do Brasil. Vol. X*. Rio de Janeiro: José Olímpio.

Vianna, F. J. d. O. (1951). *Direito do trabalho e democracia social: o problema da incorporação do trabalhador no Estado*. Rio de Janeiro: José Olympio.

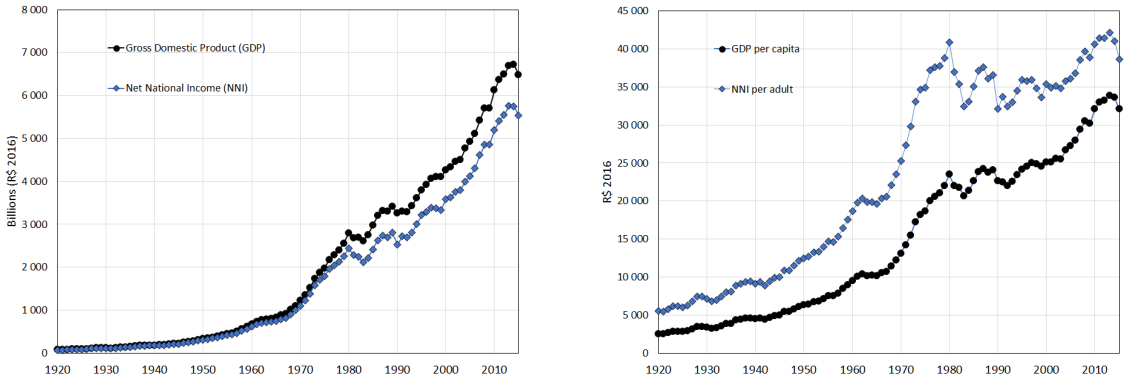
Wickizer, V. D. (1943). *The World Coffee Economy, with Special Reference to Control Schemes*. Stanford, CA: Food Research Institute, Stanford University.

WIL (2020). Distributional National Accounts Guidelines: Methods and Concepts Used in the World Inequality Database. https://wid.world/document/distributional-national-accounts-guidelines-2020-concepts-and-methods-used-in-the-world-inequality-database/.

Williamson, J. G. (2015). Latin american inequality: Colonial origins, commodity booms or a missed twentieth-century leveling? *Journal of Human Development and Capabilities 16*(3), 324–341.

Appendix A Supplementary Figures

Figure A.1: Gross Domestic Product vs Net National Income

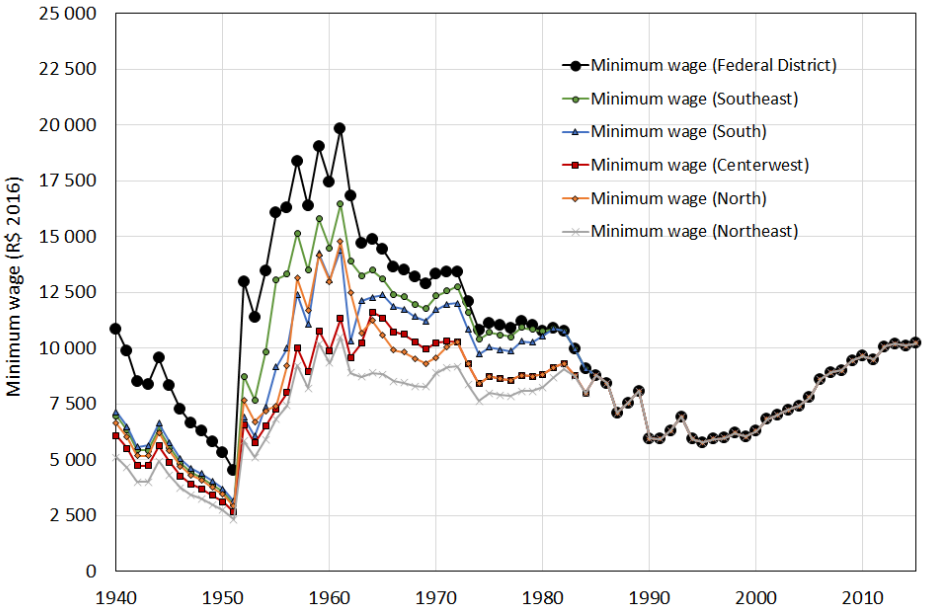


(a) GDP vs NNI

(b) GDP per capita vs NNI per adult

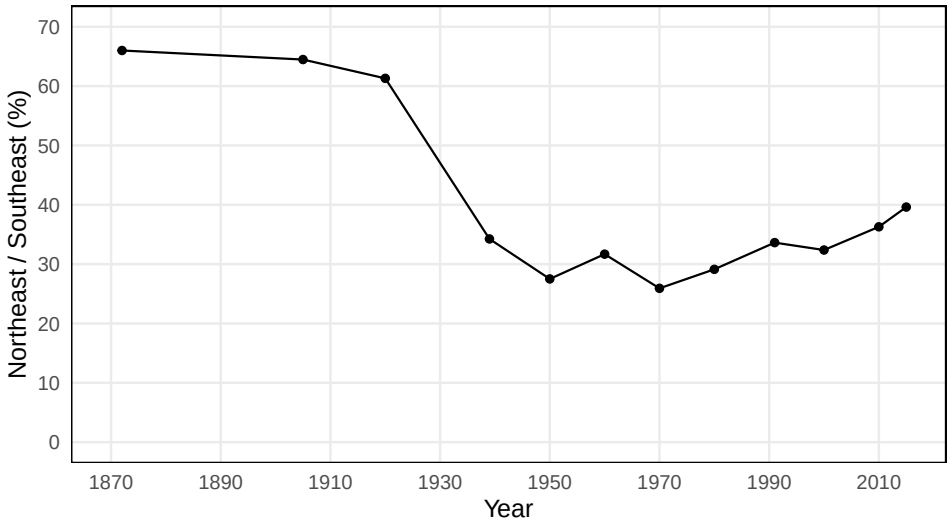
Notes: authors' calculations using data from IBGE (2006, 2017).

Figure A.2: Minimum Wages by Region in Brazil



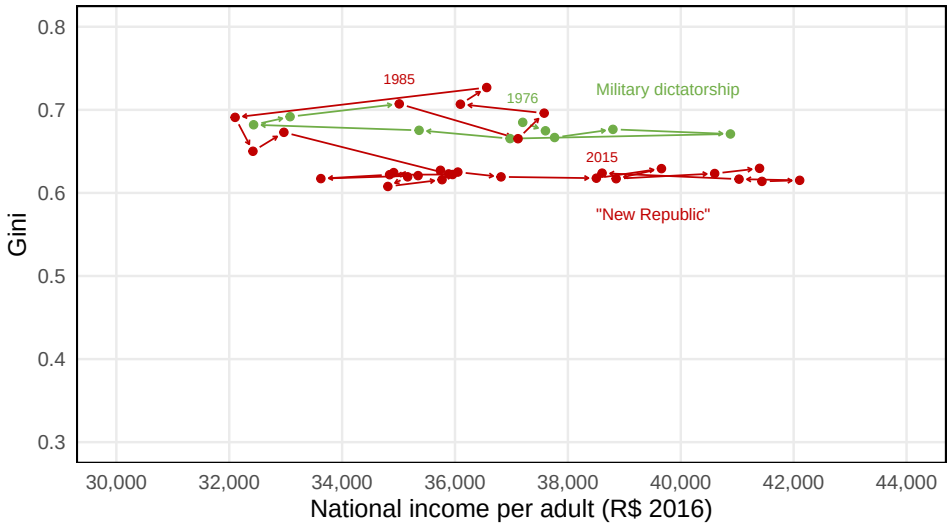
Notes: The federal minimum wage was introduced in 1984. Before 1984 minimum wages were defined by law at the state-district level, and only in urban areas before 1963. Authors calculations using nominal wage data from Saboia (1984). The Federal District comprises the city of Rio de Janeiro up to 1960 and Brasilia thereafter. All incomes are deflated by the GDP deflator from IBGE, and annually cumulated by multiplying monthly values by 12.

Figure A.3: GDP per capita in the Northeast versus the Southeast



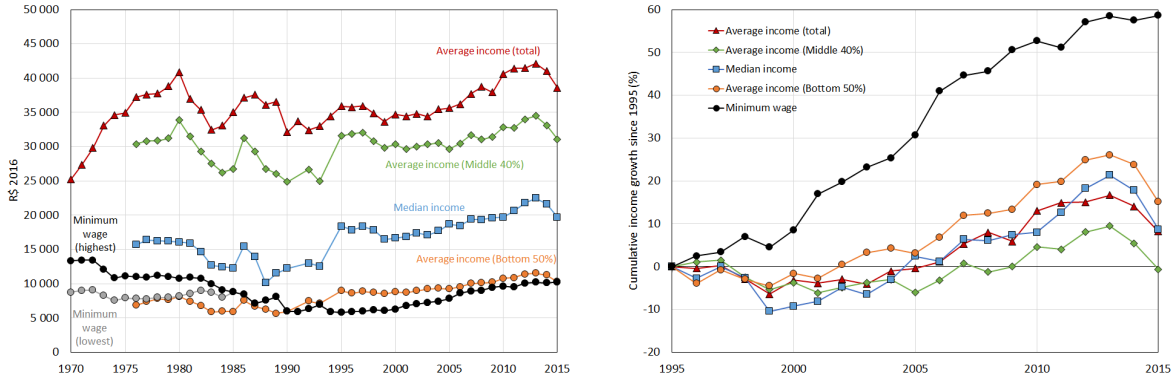
Notes: estimates of the ratio of (population-weighted) GDP per capita of the nine states in the Northeast to GDP per capita in the four states of the Southeast, 1872–2015. Authors' illustration based on data from Bucciferro and Souza (2020).

Figure A.4: Gini Kuznets curve



Notes: Distribution of pre-tax national income among equal-split adults. The unit of observation is the adult individual (20-year-old and over; income of married couples is split equally). Fractiles are defined relative to the total number of adult individuals in the population. Authors' calculations (combining survey, tax and national accounts data).

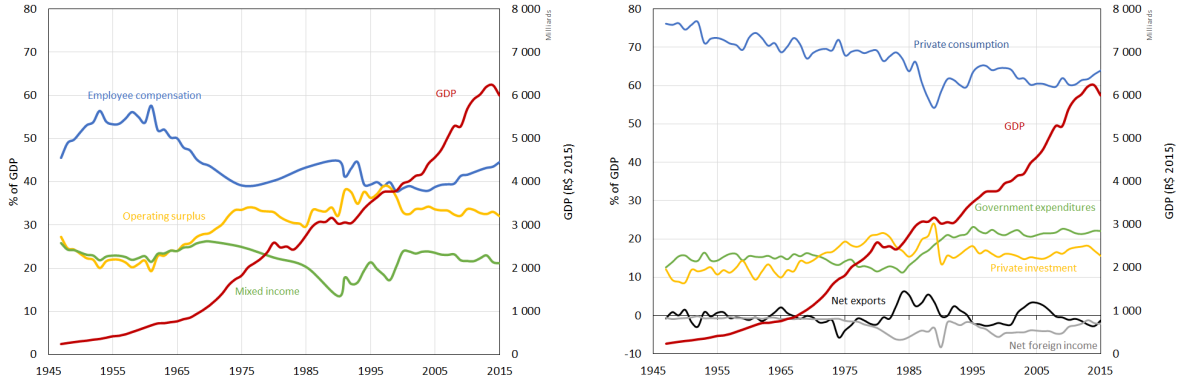
Figure A.5: Real income levels and growth rates of income by group



(a) Real income levels since 1970 **(b)** Income growth since 1995

Notes: Distribution of pre-tax income among equal-split adults across income concepts. The unit is the adult individual (20-year-old and over; income of married couples is split into two). Fractiles are defined relative to the total number of adult individuals in the population. Authors' calculations (combining survey, tax and national accounts data). Median income corresponds to the income at the 50$\hat{\text{th}}$ percentile. For minimum wage data, see Figure 7.

Figure A.6: GDP growth and GDP decompositions



(a) Income decomposition of GDP **(b)** Expenditure decomposition of GDP

Notes: authors' illustration based on GDP components from IBGE (2006); IBGE (2017). Government consumption expenditures exclude monetary social transfers and benefits, which are included in private consumption.

Appendix B Supplementary Data

The supplementary online appendix contains more detailed information on the data sources and estimation methods used in this article.