Forum for Macroeconomics and Macroeconomic Policies

IMK Macroeconomic Policy Institute

The IMK is an institute of the Hans-Böckler-Stiftung

FMM WORKING PAPER

No. 117 • June 2025 • Hans-Böckler-Stiftung

THE KUZNETS CURVE VERSUS CYCLES: RETHINKING THE DETERMINATION AND LONG-RUN EVOLUTION OF INCOME DISTRIBUTION

Thomas Palley[1]

ABSTRACT

This paper presents a theory and model of long-run cycles in income inequality. The model explains the historical pattern of income distribution identified by Kuznets (1955) and Piketty (2014). It breaks with conventional marginal product theory which claims functional income distribution is determined by the technological conditions of production. Instead, it emphasizes the role of socio-political forces that shape and drive fluctuations in the level of popular political organizations, which then impact distribution. That impact includes assessment and attribution of productivity contributions. The model provides a framework for interpreting the historical evolution of income distribution and inequality, and for reflecting on current conditions and possible future developments. The core message is twofold. First, socio-political developments matter for income distribution. Second, if those developments are cyclical, income distribution will also exhibit cyclicality.

[1] Economics for Democratic and Opens Societies, Washington, DC, mail@thomaspalley.com

The Kuznets curve versus cycles: rethinking the determination and long-run evolution of income distribution

Abstract

This paper presents a theory and model of long-run cycles in income inequality. The model explains the historical pattern of income distribution identified by Kuznets (1955) and Piketty (2014). It breaks with conventional marginal product theory which claims functional income distribution is determined by the technological conditions of production. Instead, it emphasizes the role of socio-political forces that shape and drive fluctuations in the level of popular political organizations, which then impact distribution. That impact includes assessment and attribution of productivity contributions. The model provides a framework for interpreting the historical evolution of income distribution and inequality, and for reflecting on current conditions and possible future developments. The core message is twofold. First, socio-political developments matter for income distribution. Second, if those developments are cyclical, income distribution will also exhibit cyclicality.

Keyword: Income distribution, inequality, cycles, Kuznets curve, Piketty.
JEL ref.: E3, J3, N3

Thomas Palley
Economics for Democratic and Opens Societies
Washington, DC
mail@thomaspalley.com

May 2025

1. Introduction

This paper presents a political economic theory of long-run cycles of income distribution and inequality. The paper is motivated by the empirical findings of Piketty (2014) in his seminal book *Capital in the Twenty-First Century*, which documents the great reversal in income equality that has taken place since the mid-1970s. That reversal has afflicted the entirety of the North Atlantic capitalist world, consisting of North America and Western Europe.

Piketty's findings challenge the conventional view embodied in the Kuznets curve, which

emerged out of the works of Kuznets (1955). That view asserted income inequality initially increased with economic development (measured as income per capita), and thereafter decreased. Piketty's findings also tacitly challenge another earlier view associated with Kaldor (1963) whereby developed economies are characterized by six stable stylized facts. One of those is that the capital and labor shares of net national income are roughly constant over long periods of time.[1]

The paper has two principal objectives. First, it uses Piketty's findings as a gateway for engaging an alternative view in which income distribution is subject to long-run cycles driven by cyclical changes in political and economic conditions. A model in that spirit has previously been developed by Stelzner (2014), and the current paper expands and elaborates that line of thinking. The paper is also informed by the cyclical model of long-run union density of Palley and LaJeunesse (2007), with unions being a central part of the political and institutional mechanism that generates long-run distribution cycles. Second, it uses the cyclical model to table an alternative approach to the determination of income distribution whereby the attribution of the value of work depends on institutional arrangements and subjective societal assessments which vary with societal political and social developments.

The logic of the paper is as follows. First, Piketty's (2014) empirical findings challenge the earlier conventional wisdom of the Kuznets curve. They show a wave-like pattern whereby there was a steep fall in inequality in the North Atlantic economies in the middle of the 20th

[1] It should be noted that already, before Piketty (2014), there was widespread awareness of growing income inequality. For instance, that development was documented within the OECD by Atkinson, Rainwater, and Smeeding (1995), while Galbraith (1998) documented it to be a global phenomenon using manufacturing wage data. Within the US, the work of Lawrence Mishel, Jared Bernstein, and John Schmitt was very important via their biennial volume *The State of Working America*, the first edition of which was published in 1988. The Luxembourg Income Study, created in 1983 by Timothy Smeeding and Lee Rainwater, was also very important in surfacing this development. Lastly, Piketty contributed to this awareness with his own forerunner studies of inequality in France (Piketty, 2003) and the USA (Piketty and Saez, 2003).

century, followed by a steep increase in inequality in the last quarter. Second, those steep swings are consistent with a socio-political theory of income distribution, and the swings are also consistet with the socio-political history of the period. Third, there are grounds for believing that society's socio-political evolution is subject to long cycles, so that income distribution may also exhibit cyclical swings if it is determined by socio-political factors. Fourth, the paper presents a socio-political model of income distribution that frames and explores those issues. Regardless of whether income distribution is determined by a long cycles mechanism, the model tables important concerns which have difficulty getting a hearing within contemporary economics.

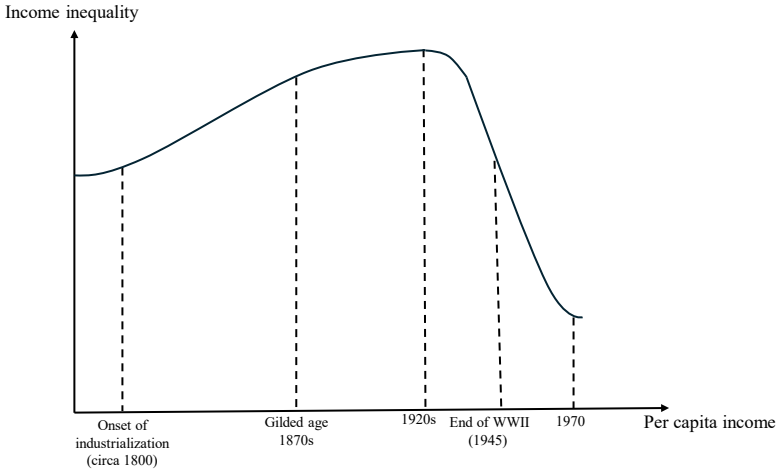
The balance of the paper is as follows. Section 2 discusses the original Kuznets curve. Section 3 discusses Acemoglu and Robinson's (2000) elaboration of the theory of the Kuznets curve to include political developments. Section 4 discusses Piketty's (2014) empirical findings which undermine the Kuznets curve and, instead, suggest income distribution should be framed in terms of long-run cycles. Section 5 briefly describes how political historians have posited the existence of political cycles. Section 6 presents the political economic model of long-run cycles in the distribution of income. Section 7 discusses the multiple implications that flow from the model. Section 8 concludes the paper.

2. The Kuznets curve

The starting point of analysis is the Kuznets curve associated with the Kuznets' (1955) seminal article on economic growth and income inequality. That article presented his hypothesis and theoretical argument (based on his observations of the US, UK, and German economies) that income inequality initially increases as an economy develops, and it then decreases after some extended period of rising per capita income. That pattern generates an inverted U-shaped relation as illustrated in Figure 1, which shows a stylized Kuznets curve for the North Atlantic economies

that illustrates approximate developments from the onset of the industrial revolution to the end of the Keynesian era in the 1970s. Since per capita income is steadily rising owing to the process of economic growth, per capita income levels can be paired with moments in history.

Figure 1. A stylized Kuznets curve illustrating the approximate historical pattern of income inequality developments within the North Atlantic economies (1800 – 1970).



The mercantile capitalist pre-industrial economy was highly unequal. With the onset of industrialization, inequality starts to further increase. That is accompanied by rising per capita income, the process behind which eventually causes inequality to peak and start falling. In Figure 1, inequality prior to industrialization is drawn as flatish. However, it may have started to increase before that (e.g., in the UK) with the late 17th century onset of mercantile capitalism and colonization which brought great wealth for a few via the colonial and slave trades. Income inequality peaks in the 1920s and then falls very rapidly and significantly through to the 1970s. Additionally, Figure 1 shows income inequality dropping far below its pre-industrialization level after World War II.

Kuznets' article focuses on three main channels. The first is saving and wealth dynamics which will tend to increase inequality as saving tends to be concentrated in upper income groups. That tendency is moderated by several mechanisms including political interventions via taxes, the dilution of the old rich by the entry of the new rich, and a tendency of a growing economy to shift the composition of employment toward higher paying jobs. In sum, for Kuznets it is economic dynamism that moderates saving and wealth inequality dynamics:

> "One can then say, in general, that the basic factor militating against the rise in upper-income shares that would be produced by the cumulative effects of concentration of savings, is the dynamism of a growing and free society (Kuznets, 1955, p.11)."

Interestingly, as discussed below, Piketty (2014) has revived concern about the adverse inequality impact of saving and wealth dynamics which Kuznets discounted.

The second channel is the impact of industrialization on demographics. Post-natal survival rates increased and death rates decreased disproportionately among lower-income groups, thereby increasing inequality:

> "... the "swarming" of population incident upon a rapid decline in death rates and the maintenance or even rise of birth rates, would be unfavorable to the relative economic position of lower-income groups (Kuznets, 1955, p.18)."

The third and most important channel was the shift of employment from agricultural to the urban non-agricultural sector. Productivity and wages were higher in the latter which explains its contribution to rising per capita income, but income inequality was also higher within it. Consequently, the initial shift of labor from agriculture to non-agriculture would increase inequality. Thereafter, income inequality within the non-agricultural sector tended to decline, thereby beginning a process of reversing higher inequality.

> "Much is to be said for the notion that once the early turbulent phases of industrialization and urbanization had passed, a variety of forces converged to bolster the economic position of the lower-income groups within the urban

population (Kuznets, 1955, p.18)".

Kuznets' hypothesis quickly became the benchmark for thinking about the determinants and pattern of long-run income distribution. The hypothesis was also interpreted as being mechanistic. Both sit poorly with Kuznets' (1955) article which was prefaced with reservations regarding data quality and openly suggested the presence of non-economic forces. First, the papers opening section (Kuznets, 1955, p.1-3) emphasizes paucity and limitations of data. Second, in explaining why inequality eventually turns down, Kuznets explicitly emphasizes the role of political factors:

> "Furthermore, in democratic societies the growing political power of the urban lower-income groups led to a variety of protective and supporting legislation, much of it aimed to counteract the worst effects of rapid industrialization and urbanization and to support the claims of the broad masses for more adequate shares of the growing income of the country (Kuznets, 1955, p.17)."

Third, Kuznets expressly emphasized the relevance of political and social factors for the determination of income distribution, with the last sentence of the paper claiming:

> "Effective work in this field necessarily calls for a shift from market economics to political and social economy (Kuznets, 1955, p.28)."

Those three reservations and observations are consistent with and supportive of the arguments made below, so that this paper is supportive of Kuznets, if not the particulars of the curve which bears his name. It was the over-confident post-war mainstream economics profession which embraced Neoclassical marginal productivity theory whereby the aggregate production function mechanistically determines income distribution, and which neglects the role of the political and social. The profession also neglected Kuznets' warning about the paucity of data and its short time-span, thereby mistakenly thinking the inverted U-shaped pattern corresponded to an enduring iron law.

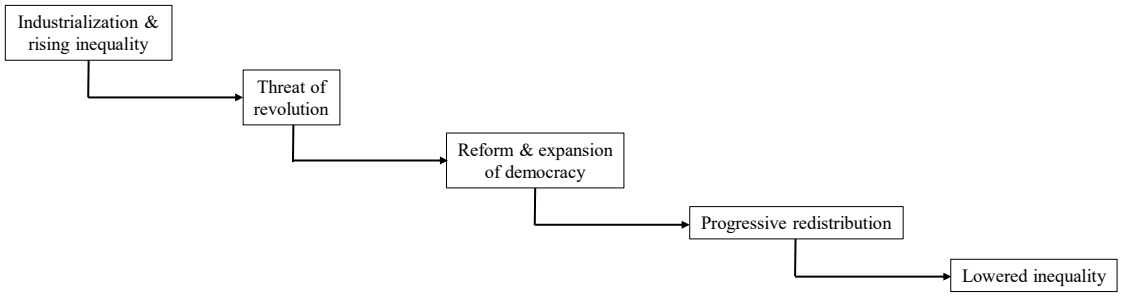
3. Introducing politics: the Acemoglu - Robinson (A&R) model with discrete political

change

The next step in the narrative is the contribution of A&R (2000). As noted above, Kuznets (1955) explicitly recognized the importance of social and political developments, but the mainstream economics chose to ignore that. A&R introduce those factors into their model of democracy and growth, which has become a central element of their magnus opus *Why Nations Fail* (Acemoglu and Robinson, 2012).

The logic of the A&R model is illustrated in Figure 2. Industrialization generates rising income inequality (i.e., the left-hand side of the Kuznets curve). That, in turn, generates socio-political resentments among lower-income workers who threaten revolution and the expropriation of the high-income group. If the revolution threat is sufficiently credible, the high-income group may reform democracy and expand the franchise to include lower-income workers. That inclusion shifts the median voter (who is the decider in their political model) in a lower income direction. In turn, the median voter decides on a higher tax rate and increased redistribution to the lower-income group, which pacifies the revolutionary impulse. For the ruling class (high-income group), that is a worthwhile strategy as the cost of franchise expansion and redistribution is less than the cost of revolution.

Figure 2. The Acemoglu - Robinson (2000) schema explaining lowered inequality.



There are several features of the A&R (2000) model meriting comment. First and foremost, it is socio-economically driven political interventions that cause income inequality to turn down, and it is those forces which explain the right-hand side of the Kuznets curve. That characterization has politics working in discrete steps. Though not explicitly addressed in the paper, there may be multiple steps. Thus, if inequality at the bottom worsens, thereby reviving the revolutionary impulse, the ruling class may enact a marginal franchise adjustment that is sufficient to generate redistributive policy change that tamps down the impulse. That process continues until the credible threat of revolution is squeezed out of the system.

Second, in the model it is taxation, redistribution, and government spending that are the engines of reduced inequality. Third, once the franchise is fully expanded, there is no room for further expansion to address discontent. Fourth, once inequality comes down, it stays down. Yet as discussed next, that is not what has happened, which is an alternative theoretical formulation is needed.

4. The Piketty (2014) revolution

Kuznets' 1955 hypothesis was presented seventy years ago, based on the limited evidence then available. The A&R (2000) model is explicitly historical, looking to explain the expansion of democracy in the 19th century. For both, the belief seems to be that once inequality comes down, it stays down.

Yet, that is not what has happened. Instead, over the course of the Neoliberal era (circa 1980 – today), there has been an inequality reversal and inequality has significantly increased. Already, by the 1990s there was growing evidence of that development. An important early contribution to the debate was from the Economic Policy Institute (EPI) in Washington, DC, with its biennial flagship publication (now discontinued) titled *The State of Working America*. The first edition appeared in 1986, and for the next thirty years EPI documented the stagnation of median hourly wages, the growing gap between average hourly productivity and average hourly pay, and the growing gap between top and low wage workers as measured by the ratio of top- and low-end wages. Another important contribution was from Galbraith (1998) who used data on manufacturing hourly wages to show growing wage inequality both in the US and in countries around the world.

Those developments were interpreted and explained by Palley (1998) in terms of a fundamental change in economic policy paradigm, whereby the post-war Social Democratic Keynesian policy regime was replaced by a Neoliberal policy regime. The new regime abandoned the commitment to full employment and severed the link between wage and productivity growth. That was accomplished by a matrix of policy changes which included deregulation of labor markets, policy antipathy to unions and minimum wages, deregulation of financial markets, diminished anti-trust enforcement, embrace of a Neoliberal model of

globalization based on free trade and unrestricted capital mobility, replacement of full employment targeting with inflation targeting, and antipathy to government expressed via diminished use of counter-cyclical fiscal policy and fiscal austerity that aimed to shrink government except for military spending.

4.a The empirics of income inequality: the Piketty contribution

Though increasingly widely accepted, the new circumstance remained contested by mainstream economics and the political establishment. The importance of Piketty's (2014) work on income inequality in the economically advanced nations is that it unequivocally established the reality of a great reversal, whereby income inequality increased across countries. Piketty had already contributed to the debate via his coauthored work with Emmanuel Saez (Piketty and Saez, 2003) on income inequality in the US, but his book put the question beyond doubt by updating the time-period and extending the analysis to other developed economies.[2]

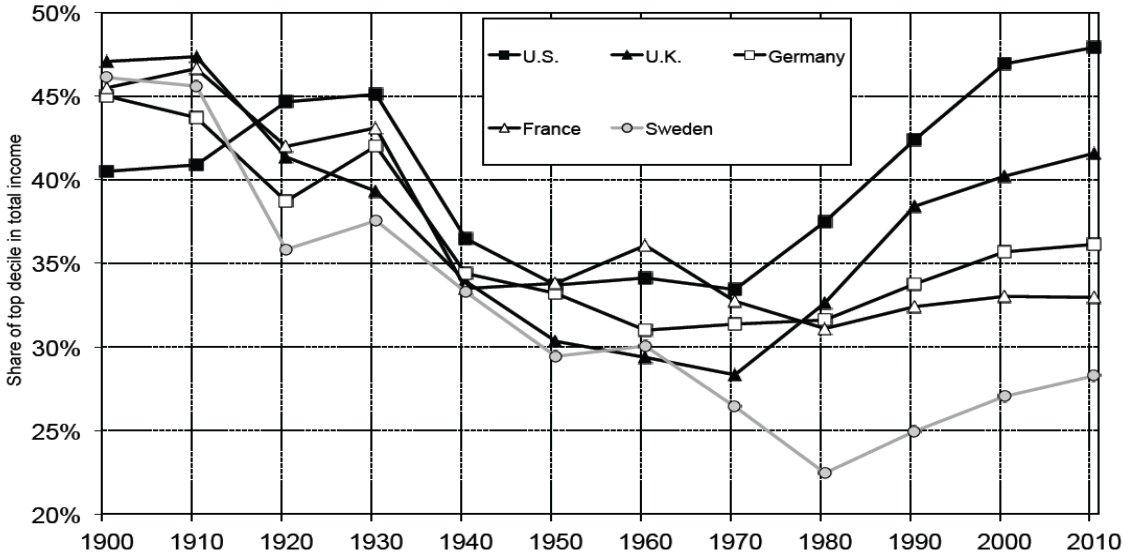
Whereas Kuznets (1955) had lamented the paucity of data, Piketty's research program has used income tax records of individuals which are extraordinarily dense and complete. Individual tax records have a comprehensiveness and granularity that is directly relevant to the issue of personal income inequality. Contrastingly, average hourly wage data is incomplete relative to tax records re total household income, lacking both hours worked and other sources of income.[3]

[2] A striking feature is that knowledge of increased income inequality was widely known long before the publication of Piketty's (2014) classic, having been documented by many leading establish economists (see for example Atkinson et al. (1995), Galbraith (1998), and especially the Economic Policy Institute's biennial *The State of Working America* published since 1988. Hirschman (2021) asks why the economics profession took so long to table the issue of the rising income share of the top 1% and incorporate it into contemporary income inequality debates. His answer is intellectual inertia within academia. I would argue that inertia is selective and serves a class purpose. It is part of the mechanism whereby business stimies development of political opposition, as discussed in section 6.b of this paper.

[3] Pressman (2016, Chp. 2) discusses the issue of Piketty's use of individual tax data, which contrasts with the use of hosehold income survey data. All data has limitations. The principal limitations of tax data are non-reporting of

Figure 3 summarizes Piketty's (2014) first major finding re income inequality. It shows the top decile pre-tax income share in the U.S. and selected European countries (UK, Germany, France, and Sweden) for the period 1900 – 2010. The top decile share can be interpreted as a measure of income inequality, with a greater share corresponding to greater income inequality. Given that interpretation, income inequality was roughly flat between 1900 and 1930. With the onset of the Great Depression, it fell precipitously through to 1970. Thereafter, income inequality has risen steadily and returned to near peak levels in four of the countries, and it has exceeded that prior peak level in the US.

Figure 3. The top decile pre-tax income share in the U.S. and selected European countries, 1900 – 2010.
Source: Piketty (2014), Figure 9.7, p.323.



income and not capturing family size. The principal limitations of survey data are unrepresentativeness owing to sample selection bias and false or incomplete reporting. A striking feature is that Piketty's findings are essentially substantiated by all sources of data. That is evident in the US Gini coefficient data (see Pressman, chp. 2, p.30) which paints a near identical picture to that reported by Piketty. His findings are also consistent with those reported by Galbraith (1998) and updated versions thereof, and those reported by the Economic Policy Institute in its biennial *The State of Working America* publication, which also includes some international income inequality data.

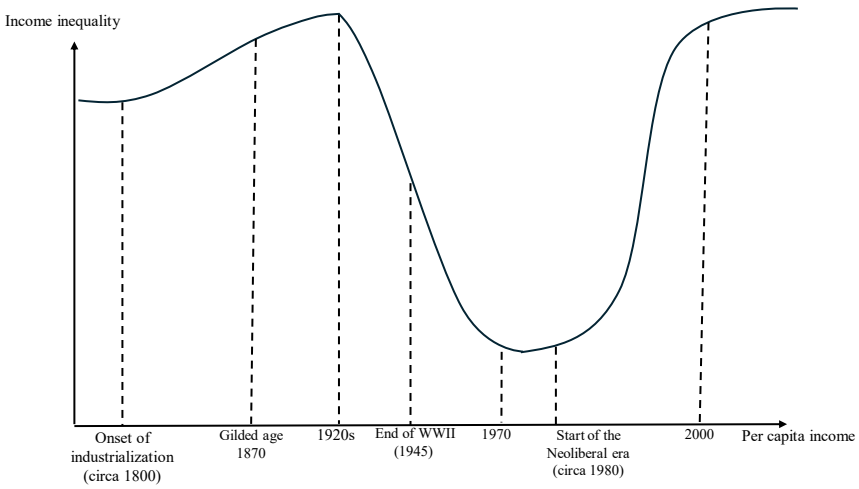
Piketty's second major finding is that the above swings in income distribution have been substantially driven by developments affecting the top one percentile. That is especially true for the Anglo-Saxon economies of the US, Britain, Canada, and Australia. That is important at the policy level as it suggests the problem may be more amenable than widely thought via targeted policy interventions. It is also supportive of the theoretical approach adopted in this paper. That is because the top one percent are the political elite of society, and their economic position stands to be most impacted by the socio-political forces emphasized in the model below.

Figure 3 can be related to the Kuznets curve shown in Figure 1. The horizontal axis in Figure 3 is time. The horizontal axis in Figure 1 is per capita income. There is a correspondence between the two because economies were growing steadily throughout that period, albeit subject to business cycle fluctuations. Consequently, the time axis in Figure 3 can be relabeled per capita income with no loss of coherence, since increased time closely corresponds with higher per capita income.

Combining Figures 1 and a relabeled Figure 3 then yields a wave like picture as shown in Figure 4. There are three segments to the figure. The first segment runs from the onset of industrialization (circa 1800) to the peaking of inequality in the 1920s. The second segment saw inequality steadily decline. It includes the onset of the Great Depression (1929), and it ends with a plateauing of income inequality at a low level at the apogee of the Keynesian era (1970). The third segment begins with the onset of the Neoliberal era (circa 1980) and sees a rapid reversal in income inequality that takes it back to 1929 levels by 2000. Thereafter, inequality stabilizes. Read as a whole, Figure 4 suggests the possible existence of a long cycle, consisting of a fifty-year downswing in income inequality, followed by a fifty-year upswing. It is that possibility that

motivates the balance of the paper, which explores why income inequality might be subject to such a cyclical mechanism.

Figure 4. A stylized representation of the history of income inequality for the North Atlantic economies based on a combination of the Kuznets curve and Piketty's findings.

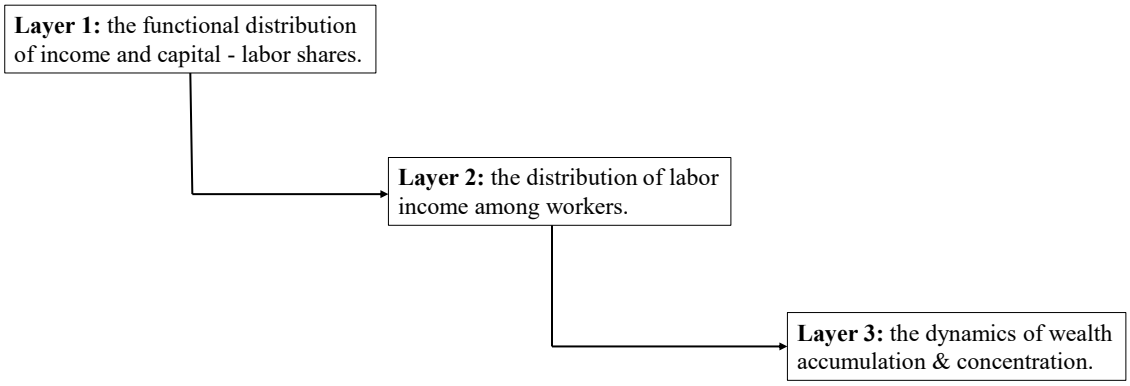


4.b Piketty's theory of income inequality

The next issue is Piketty's (2014) own theory of income distribution, which is of interest for two reasons. First, it is of interest in its own right. Second, and more important, there is the question whether his theory can explain his own empirical findings. If not, that suggests need for new theory to explain the pattern in Figure 4.

Piketty's approach to explaining income inequality rests on three layers of analysis, and it is illustrated in Figure 5. Layer 1 explains the functional distribution of income, which divides income into capital and labor shares. Layer 2 explains the distribution of labor income among workers, and workers include CEOs whose income is classified as labor income. Layer 3 explains the dynamics of wealth accumulation which is relevant because wealth yields income, and concentration of wealth contributes to income inequality.

Figure 5. Deconstructing Piketty's (2014) analysis of income inequality.



As regards his own theory, Piketty adheres to conventional Neoclassical marginal productivity theory of income distribution, whereby functional income distribution is determined by the technical characteristics of the production process, as represented by the production function. That is evident in chapter six (Piketty, 2014, p.199-234) which tackles the capital-labor income split (layer 1). Within Neoclassical theory, the elasticity of substitution between capital and labor (σ) is critical. Economic growth is characterized by a rising capital-labor ratio (k). If σ = 1 (the case of the Cobb-Douglas production function), capital's share is constant as k increases. If σ > 1, capital's share increases with k. If σ < 1, capital's share decreases with k. *Ergo*, to the extent that rising income inequality is due to an increasing capital share, Neoclassical economic logic attributes that to σ being greater than 1. However, the empirical evidence (Gechert, Havranek, Isrova, and Kolcunova, 2022) suggests σ is significantly below unity. That is a problem for Piketty's (2014) theoretical account of his findings, and part of the motivation for this paper's suggested alternative approach.

Chapter nine (Piketty, 2014, p.304-335) discusses inequality of distribution of labor income (layer 2), and it introduces some institutional considerations. Mention is made of the minimum wage and of excessive super-manager (CEO) pay in Anglo-Saxon economies, with the former lowering inequality and the latter raising it. However, everything is viewed through a Neoclassical lens. Minimum wages may reduce income inequality, but they will also tend to lower employment – though that risk is mitigated given the current low level of minimum wages in the US. Reflecting his Neoclassical disposition, Piketty (2014, p.310-313) inclines against minimum wages as an important long run institutional mechanism for addressing inequality.

Excessive Anglo-Saxon CEO pay is viewed by Piketty as being the product of institutional distortions, constituting a pricing distortion relative to marginal productivity pricing. In his attempt to explain the stark differences in supermanger pay across countries, Piketty seeks to distance himself from Neoclassical marginal productivity theory, writing that "the theory of marginal productivity and of the race between technology and education does not seem capable of providing (Piketty, 2014, p.321" an explanation of supermanager pay. However, that attempt at distancing introduces cracks in the book's overarching theoretical structure which is predicated on marginal productivity theory. If it is not possible to identify the marginal productivity of CEOs and top management, how is it possible to identify the productivity of those below them? Thus, the theory begins to unravel as it inclines to an all or nothing proposition.

Lastly, and very surprisingly, trade unions and their decline are absent from the analysis (about which more below). Bargaining power is almost entirely absent in the analysis, there being one reference to it in connection with the minimum wage (Piketty, 2014, p.312), which is presented as an antidote to employer monopsony power. According to Neoclassical economics, both unions and a minimum wage would be an inefficiency, even if they reduce inequality. Another surprise

is that Piketty's (2014, p.304 – 335) discussion of labor income inequality also makes no mention of globalization or financialization. The former have placed workers in global competition with each other, while the latter has pushed firms to embrace the shareholder value maximization paradigm and to use debt to pre-empt worker claims on profits (Palley, 2007).

Layer 3 regarding wealth accumulation and concentration dynamics is addressed in chapter ten (Piketty, 2014, p.336-376). The concern with wealth concentration links back to Kuznets' (1955) paper. However, whereas Kuznets believed market dynamism rendered the issue unproblematic in the long-run, Piketty views it as highly problematic. The problem is explained through the inequality $r > g$, where r represents the after-tax rate of return on capital and g represents the economy's growth rate. If $r > g$, owners' wealth (W) will be growing faster than the aggregate income (Y), leading to an increase in the wealth-to-income ratio. With a given setting for r and g, wealth-owners will take an increasing share of aggregate income. Since wealth ownership is unequal, income inequality will increase.

According to Piketty (2014, p.353-358), except for the mid-20th century when taxes were high, the historical norm appears to be $r > g$. That suggests capitalism tends to wealth concentration absent high taxes on capital. For Piketty, the solution is wealth taxation and redistribution. However, that must be accomplished in a manner that does not imperil the accumulation of capital which sustains the system.

4.c An assessment: taking stock

Piketty's fundamental contribution concerns the documentation of long-run developments in income inequality. As noted above, his research program summarized in *Capital in the Twenty-First Century* (Piketty, 2014), provides definitive proof of adverse changes in income distribution that many already suspected by the mid-1990s. That proof has been of massive political

consequence as the documented changes have been of such scale that it has pushed the income distribution question to the fore of the political debate. Before Piketty (2014), it was still possible for the political and economic establishment to dismiss concerns about massively increased income inequality: after Piketty (2014) it was not.[4]

As part of legitimizing the political salience of the inequality issue, Piketty has also put wealth taxes squarely back on the table. Such taxes, including inheritance taxes, have a long history. However, in the Neoliberal era which began circa 1980, they have been increasingly challenged and subject to reduction. Piketty's work has given such taxes renewed legitimacy and they are increasingly widely canvased.

Another benefit from his work is the boost it has given to interest in the theory of income distribution. Additionally, his work has given increased legitimacy to the Kaleckian formulation of Keynesian AD theory, which is widely used by Post Keynesians. That formulation emphasizes the significance of the capital-labor income share for the determination of AD, with functional income distribution impacting aggregate investment and aggregate consumption spending.

The key question is does Piketty's own theory satisfactorily account for his own empirical findings and the pattern shown in Figure 4? Piketty's approach is rooted in conventional marginal product theory. It emphasizes the elasticity of substitution between capital and labor (σ), and the dynamics of wealth accumulation rooted in the interest rate (r) versus growth (g) relation. The one non-conventional "institutional" feature is super-manager (CEO) pay.

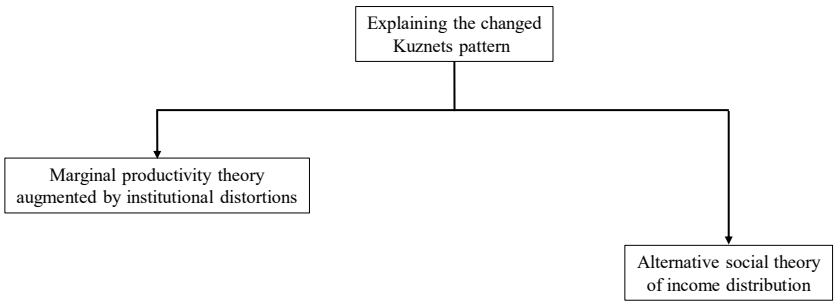
[4] While Piketty (2014) has garnered most attention and carried the argument across the line, his work stands on the shoulders of giants. In particular, the work of the late Anthony Atkinson was particularly important, and Atkinson (1975) launched the contemporary interest in the study of income inequality with his book *The Economics of Inequality*. Additionally, the Luxembourg Income Study that began in 1983 has been critical in its provision of microeconomic household data that could empirically document developments.

According to Piketty (2014) and as shown in Figure, the mid-20th century decline in inequality happened in approximately thirty years (1930-1960), while the late 20th century increase in inequality happened in about 20 years (1980-2000). That pattern of rapid change sits uneasily with conventional marginal productivity theory which emphasizes stable deep parameters. That provides another reason for considering alternative explanatory frameworks of the determination of income distribution.

4.d Critique and prelude to an alternative

The above tension suggests need for new theory to explain the dramatically changed Kuznets pattern and the speed with which massive changes in societal income inequality have occurred. Figure 5 illustrates two competing approaches. One approach (the Piketty route) is to stick with marginal productivity theory and augment it with institutional distortions, as exemplified by CEO pay which has increased income inequality since the 1980s. To explain the mid-20th century decline in inequality, Piketty might appeal to the jump in union density brought about by changes in labor law.

Figure 6. Competing approaches to explaining the changed Kuznets pattern.

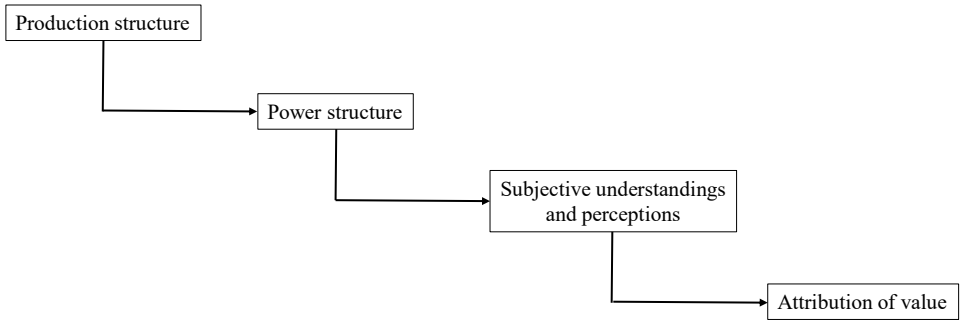


However, that spotlights the problems with Piketty's institutionally augmented marginal productivity approach whereby he accepts marginal productivity theory but then appeals to *ad hoc* institutions to patch anomalies therewith. First, it tends to view unions and institutions protecting workers and increasing wages as inefficiencies that decrease employment. Second, it remains attached to a de-socialized and technological view of productivity whereby productivity is determined by the objective technological conditions of production. That denies a role for subjective and social factors. Third, though "power" can be introduced into the marginal productivity approach, with those holding power imposing institutions that twist pay outcomes in their favor, that treatment has power being imposed exogenously as if the "natural" state of being is absence of power. Such a characterization is at odds with reality, where power is always and inevitable present. The idea of no power is ontologically impossible. Power is like oxygen. The air can be more or less rarified, but there is no life without oxygen. Similarly, there is no economy without power relations. Viewed in that light, productivity is never natural and

objective. Instead, it is nested in a nexus of power relations which affect every aspect of its determination and assessment.

Those observations point to a second approach which views income distribution as being socially informed and determined. That approach is developed in Palley (1996) and is illustrated in Figure 6. There is a "structure of production" which is governed by a "power structure". The participants in that power structure hold "subjective understandings and perceptions" about the structure of production and the value contributed thereto by the elements of the structure of production (i.e., capital, skilled labor, unskilled labor, managers, CEO, etc.). The power structure intermediates those subjective perceptions and generates an "attribution of value" which determines payments and the employment mix.

Figure 7. An alternative approach to the determination of income distribution.



That structure exists within every enterprise, but agents across enterprises share much in common and thereby generate similar attributions of value. Power structures within enterprises reflect history and shared societal thinking. Agents' subjective perceptions are similar, being

based on common learned systems of understanding that are culturally and ideologically informed. The result is attributions of value that are broadly similar across enterprises, but those attributions are social constructs rather than objective measurements.

The contrast with conventional marginal productivity theory and the workings of the system can be described as follows:

> "The operation of neo-classical distribution theory rests on the premise that marginal products are objectively identifiable and measurable by firms. However, once the social construction of marginal products is recognized, they become historically and culturally located, and reflect current practices of attribution. Thus, marginal product schedules should be viewed as indexed by the system of measurement and attribution currently in practice, and any change in this system will cause the schedule to shift. Different conventions of measurement and attribution will therefore give rise to different assessments of marginal products, even if there is no change in technology... These measurement and attribution concerns illuminate why distributional outcomes are fundamentally social. The reliance on the market does not alter this, since market outcomes rely on the attribution practices used by agents; the market is simply the site where agents implement these socially arrived at standards (Palley, 1996, p.65-66)."

5. Political historians and political cycles

The next step in constructing an alternative account of the determination of income inequality is the inclusion of politics. Kuznets (1955) tacitly recognized the importance of politics, and politics is central to A&R's (2000) explanation of the historical Kuznets curve. However, in their model, it enters temporarily as a lock-in device (i.e., franchise expansion) that causes policy changes which bring down inequality.

In the model developed in Section 6 below, politics remains a persistently present and operative force. The model is informed by accounts of US political history in which there is a tradition that emphasizes political cycles. The first contribution in that spirit was by Henry Adams (1890) who characterized US politics as a pendulum with a twelve-year beat:

> "A period of about twelve years measured the beat of the pendulum. After the

> Declaration of Independence, twelve years had been needed to create an efficient Constitution; another twelve years of energy brough a reaction against the government then created; a third period of twelve years was ending in a sweep toward still greater energy; and already a child could calculate the result of a few more such returns (Adams, 1890, p.123)."

Adams' pendulum model was followed by Arthur Schlesinger, Sr.'s (1939) cycle model, and that cycle model was further elaborated and applied to an extended history by his son Arthur M. Schlesinger, Jr., (1986) in his book *The Cycles of American History*. Schlesinger Sr. represented US politics as cycling between periods of liberalism and conservatism. Periods of liberalism corresponded to increasing democracy, while periods of conservatism corresponded to containing democracy. Analyzing US history from 1765 to 1931, Schlesinger identified ten periods which he believed constituted a system that exhibited a regular rhythm:

> "Is there a rhythm of American politics which not only explains our past development but may also provide a clue to the future? The average length of the ten periods is 16.6 years. The actual length has usually fluctuated with a few years of the norm (Schlesinger, Sr., 1939)."

Looking forward, he also predicted that:

> "... It is evident that the revolt against conservatism that began in 1931 will last until 1947 or 1948, with a possible error of a year or so one way or the other. The next turn of the tide will then be due in the neighborhood of 1963 (Schlesinger, Sr., 1939)."

There is a case for saying Schlesinger Sr.'s prediction was quite prescient. A post-war conservative cycle (1947-1960) began with the passage of the Taft-Hartley Act in 1947 and lasted until the election of President Kennedy in 1960. Thereafter, the cycle (1960-1980) turned liberal again and lasted till the Ronald Reagan's election in 1980, though already under President Carter liberalism was in retreat. Reagan's victory triggered another cycle of conservatism which should have lasted until the second-half of the 1990s, but over the last thirty years the mechanism seems to have stalled. Though control of the presidency has switched between

Republicans and Democrats, the political tempo has been mixed. On one hand, the economic realm has been dominated by conservative Neoliberalism. On the other hand, the social realm has been bitterly contested between social liberals and social conservatives, with liberals perhaps having the upper hand.

6. Assembling the pieces: the inequality super-cycle

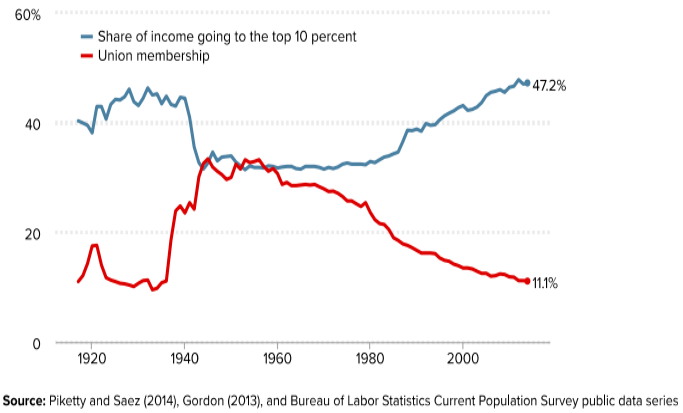
This section presents the model of cyclical long-run income distribution, which aims to explain the long run evolution of income distribution as identified by Kuznets (1955) and Piketty (2014). That evolution connects to social and political economic developments, showing how income distribution is shaped by social and political economic forces. The model is termed a super-cycle as it operates over many decades. It is intended to apply to the North Atlantic economies which are the focus of Piketty's empirical investigations.

As noted earlier, it is related to an earlier paper by Stelzner (2014) who also sought to provide a theory of long-run cycles of income distribution and inequality rooted in politics and political choices. In that model political action is a form of public good, and the model emphasizes cyclical changes in agents' preferences which induce them to vary their supply of the public good (i.e., political action). Rising income inequality causes voters to become more public spirited out of concern with adverse societal impacts of income inequality, which generates political action and policy choices that reduce inequality. Like A&R (2000), Stelzner emphasizes the role of taxes and transfers.

The proposed model is also related to a paper by Palley and LaJeunesse (2007) in which union density can fluctuate between a high- and low-density equilibrium. The model that is developed below emphasizes popular political organization that combat inequality in the economy and via politics and policy. Unions have historically been a critical organization, doing

both. Palley (2012, Tables 9.1 and 9.2, p.151) documents how union density is correlated with income inequality. That effect is visible in Figure 8 which shows the relationship in the US between union density and Piketty's (2014) measure of the top decile's income share. That share fell in the 1940s as union density jumped, and it then rose again after 1980 as the decline in union density accelerated.

Figure 8. US Union membership and the top 10% income share, 1917-2014.
Source: Economic Policy Institute.



Source: Piketty and Saez (2014), Gordon (2013), and Bureau of Labor Statistics Current Population Survey public data series

The mathematical model that is developed below should be understood as being in the spirit of a parable. It makes no claim to mirror reality or to predict the timing of developments that lie ahead, and it is not suitable for simulation. Instead, it is a story-telling and thought device that introduces two issues. The first is that income distribution may be cyclical in nature. The second is that income distribution may be far removed from the standard objective construct of marginal productivity. Instead, it may depend on subjective constructions that are socio-politically determined. The formal model below provides a useful way of framing these issues, describing history, spotlighting mechanisms that generate cycles, and identifying factors that

would change character and orbit of cycles.

6.a A super-cycle model of income inequality

The proposed model of cyclical inequality is driven by two state variables, organized popular political opposition (A) and wealth and income inequality (Z). Popular political opposition is a multi-faceted variable referring to formal organized political activity, societal NGO organizations, and societal political consciousness. It also includes unions and union density. The level of organized popular political opposition captures the level of societal political opposition to the ruling class (i.e. the rich/capitalists). The time scale of the model is decades, with the model describing a slow historical process.

There are two dynamic equations that drive the evolution of the two state variables, and the two interact to generate a limit cycle which has income inequality and political organization cycling together. The political economic logic is as follows. Rising income inequality generates a popular political response that raises political organization which initially serves to limit the rate of increase of inequality, which then serves to reduce inequality. That reduction then diminishes the incentive and demand for political organization, which initially serves to lower the rate of growth of organization and then causes organization to go into decline. That decline allows for the return of higher inequality.

The equations of the limit cycle model are given by

(1) $\dot{Z} = f(Z, A)$ $\quad f_Z \geq 0, f_{ZZ} \leq 0, f_A \leq 0, f_{AA} \leq 0$

(2) $\dot{A} = g(Z - Z^*)$ $\quad g_Z \geq 0, g_{ZZ} \geq 0$

Z = level of income inequality, Z* = socially acceptable level of inequality, A = level of organized popular political opposition.

Equation (1) determines the rate of change in inequality ($\dot{Z}$). The rate of increase in

inequality is positively impacted by the level of inequality, and negatively impacted by the level of organized popular political opposition. High inequality increases the power of the rich, enabling them to push policies that further increase inequality ($f_Z > 0$), but the marginal effect diminishes with inequality ($f_{ZZ} < 0$), as if the low hanging policy options are plucked. High popular organized opposition restrains the rich from pushing policies that increase inequality ($f_A < 0$), and that restraining power increases with organization ($f_{AA} < 0$).

Equation (2) determines the rate of change of popular political organization ($\dot{A}$). It is positively related to the gap between actual inequality (Z) and socially acceptable inequality (Z^*) so that $g_Z > 0$. The galvanizing impact on organization also increases with inequality ($g_{ZZ} > 0$).

6.b Some initial comments

The model is in the family of predator – prey models. Organized popular political opposition (A) is the predator, and the level of inequality (Z) is the prey. Organized popular political opposition is fed by inequality (equation (2)), and it then preys on the level of inequality (equation (1)).

Equation (1) drives the level of income inequality. Absent popular political opposition to tame inequality, a capitalist economy will tend to produce increasing inequality and concentration of wealth, and the economy would tend toward an oligarchic equilibrium in which the wealthy few own everything. That picture resonates with Piketty's (2014) r > g logic, which is why he advocates taxation to block that tendency.[5]

Popular political organization is critical for counter-vailing that proclivity to plutocracy. It drives policy changes re the organization of production, wage bargaining and labor market

[5] In addition to wealth driving policies favorable to the wealthy, there are also several microeconomic mechanisms promoting plutocracy. First, Fisherian time preference may be a negative function of income and wealth. Second, asset returns are positively related to risk, and risk preference may increase with wealth because the wealthy have the capability to bear risk. Third, the wealthy have a higher propensity to save according to the logic of relative consumption theory (Duesenberry, 1949; Palley, 2010).

power, and taxation and redistribution within society. It also influences how society understands itself, thereby impacting the process of value attribution discussed in Section 4.

Equation (2) drives the level of organization. If inequality is below the socially acceptable level ($Z - Z^* < 0$), the rate of political organization goes negative and the level of organization starts to decline. Popular society thinks it does not need the protection of organization. This is an important to social mechanism. Political success at bringing about reforms that lower inequality cause society to "forget" about past struggles and the need for reform. In effect, success sows the seeds of its own destruction, thereby setting up the conditions for the next cycle.

The degree of income inequality (Z) can be viewed as influencing the relative political economic power of the rich/capitalist, so that increased inequality increases capitalist power ($f_Z \geq 0$) in equation (1). That relationship can be captured by adding a third equation

(3) $P = \pi(Z) \qquad \pi_Z \geq 0, \pi_{ZZ} < 0$

where P = capitalist power. In that case, equation (1) would be respecified as

(1.a) $\dot{Z} = f(P, A) = f(\pi(Z), A) \qquad f_P \geq 0, f_{PP} \leq 0, f_A \leq 0, f_{AA} \leq 0$

The political economic logic of equations (1.a) and (3) is that relative political economic power drives the evolution (rate of change) of income inequality, and relative power depends on the existing degree of income inequality.[6] However, for simplicity of exposition, that relationship is suppressed and implied in equation (1). As discussed below in Section 7.f, organized popular political opposition must be able to overcome the effect of capitalist power (Z) in equation (1). If not, the model will have the economy move to a position of permanent capitalist dominance

[6] Note, other institutional and cultural variables could be introduced into equation (3), thereby enriching the structure determining reltive power. That enrichment possibility speaks to the value of the framework for describing and understanding the problematic.

where they push their power to the limit of what it can do in the suppression of popular opposition ($f_Z = 0$).

Likewise, a distinction can be introduced between the level of popular political organization and the level of political opposition, with popular political opposition (A) driving the formation of popular political organization (O). That relationship can be captured by adding a fourth equation

(4) $O = \varphi(A)$ $\quad \varphi_A \geq 0, \varphi_{AA} < 0$

where O = popular political organization, A = popular political opposition. In that case, equation (1) would be respecified as

(1.b) $\dot{Z} = f(Z, O) = f(Z, \varphi(A))$ $\quad f_Z \geq 0, f_{ZZ} \leq 0, f_O \leq 0, f_{OO} \leq 0$

For purposes of simplicity that relationship is also suppressed and implied in equation (1).

Other institutional refinements are also possible. For instance, one might distinguish between organized opposition (O) and unorganized societal opposition (U), with unorganized opposition also being positively driven by A and given by

(5) $U = u(A)$ $\quad u_A \geq 0, u_{AA} < 0$

In that case, a fully specified (most complex) version of equation (1) would be given by

(1.d) $\dot{Z} = f(P, O, U) = f(\pi(Z), \varphi(A), u(A))$ $\quad f_P \geq 0, f_{PP} \leq 0, f_O \leq 0, f_{OO} \leq 0, f_u \leq 0, f_{uu} \leq 0$

That richer political and institutional formation is tacitly implied in the simple formulation given by equation (1) because the reduced form of equation (1.d) corresponds to equation (1). However, using the simplest formulation is preferred because it makes presentation of the argument clearer, without any loss of generality.

Lastly, the model can also be modified to incorporate the impact of pro-business social and political organization. Pro-business organizations can be viewed as working to stimy and

dampen the development of organized popular political organization. This type of activity and its important impact on societal economic thinking is identified by Phillips-Fein (2010), Burgin (2012), Carter (2020, p.370-394), and Oreskes and Conway (2023), with business being an important actor in turning the post-war societal thinking against Keynesianism and in favor of Neoliberalism. That effect can be incorporated via two channels. First, business may be able to impact the socially acceptable level of inequality (Z*) as follows

(6) $Z^* = g(K)$ $g_K \geq 0$, $g_{KK} \leq 0$,

K = level of pro-business social and political organization. Thus, pro-business political activity can make inequality more acceptable via its impact on societal thinking and understandings Second, pro-business social and political political organization may also impact the evolution of popular opposition as follows

(2.a) $\dot{A} = g(Z - Z^*, K)$ $\quad g_Z \geq 0$, $g_{ZZ} \geq 0$, $g_K \leq 0$, $g_{KK} \geq 0$

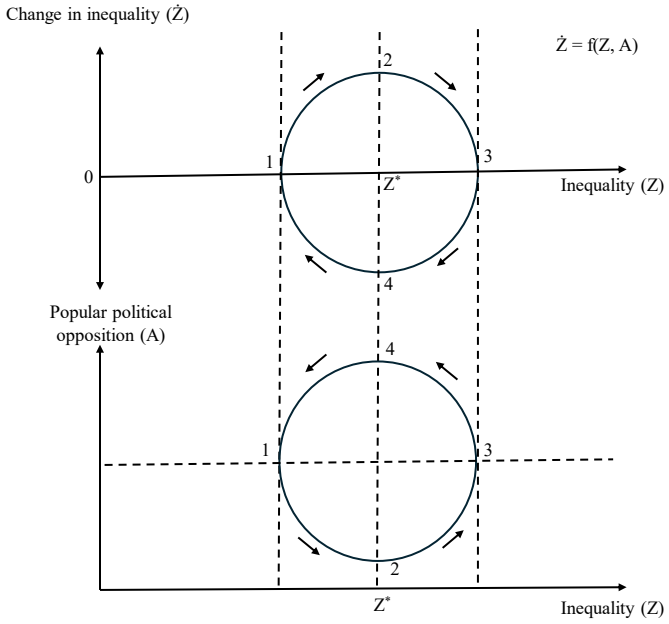
Equation (2.a) modifies equation (2), and it has pro-business political activity retarding the development of organized popular political organization in response to worsening income inequality.

These additions illustrate the value of the proposed model framework. Such issues are understood by historians and political activists, but they are invisible in economics. The proposed model provides a means whereby they can be tabled.

6.c Workings of the model

The workings of the model are illustrated in Figure 9. There are two stylized cycles that move in opposite directions. The upper cycle describes the evolution of inequality and moves clockwise. Inequality cycles around the socially acceptable level, which anchors the system. The lower cycle describes the evolution of popular political opposition and moves counter-clockwise.

Figure 9. The stylized dynamics of inequality (Z) and popular political opposition (A).



The upper diagram in Figure 9 is explained as follows. Point 1 marks the point of lowest inequality (greatest equality). As the economy passes through that point inequality (Z) starts to increase. The change in inequality (Ż) then slowly increases for two reasons. First, inequality is increasing, which reinforces the process by increasing the political power of the rich. Second, popular political opposition (A) is falling because inequality is below the socially acceptable level ($Z < Z^*$) so that opposition is deemed less necessary, which enables more inequality.

The economy then cycles to point 2 where the change in inequality peaks. The peaking occurs because there are diminishing policy returns to the rich from increased power conferred by inequality, and because the decline in political opposition slows because inequality is approaching an acceptable level (Z^*). Note, point 2 is at the top of the upper cycle, but at the bottom of the lower cycle. Next, the economy cycles to point 3, where inequality peaks. Inequality keeps increasing in this segment because z is increasing as political opposition is

weak, but the level of increase now starts falling for two reasons. First, there are further diminishing returns to policy from increased power of the rich (they are already getting their way on almost everything). Second, political opposition is now on the rise ($\dot{A} > 0$) as inequality is increasingly unacceptable ($Z > Z^*$).

Thereafter, the economy cycles to point 4. Inequality drops along this segment because political opposition (A) has grown and continues to grow ($\dot{A} > 0$) because inequality is still socially unacceptable ($Z > Z^*$). Finally, the economy cycles back to point 1 where the cycle begins again. Inequality is still diminishing in this last segment as political opposition (A) is still strong, but it is now in decline because inequality has become socially acceptable ($Z < Z^*$). The process of "forgetfulness" has begun to kick in.

The logic of the lower diagram is easier to explain. Popular political opposition declines ($\dot{A} < 0$) when inequality is below the level of social acceptability ($Z < Z^*$), and it increases ($\dot{A} > 0$) when inequality is above the level of social acceptability ($Z > Z^*$). In the acceptable region, the decline in opposition initially accelerates (segment 4 to 1) because inequality is decreasing ($\dot{Z} < 0$), but it then decelerates (segment 1 to 2) because inequality is increasing ($\dot{Z} > 0$), albeit from a low level.

In the unacceptable region, formation of political opposition is initially increasing (segment 2 to 3) because inequality is rising ($\dot{Z} > 0$). Thereafter (segment 3 to 4), political opposition is still increasing because the economy is still in the region of socially unacceptable inequality ($Z < Z^*$), but the pace of increase is slowing because inequality is declining, albeit from its peak level.

7. Implications of the model

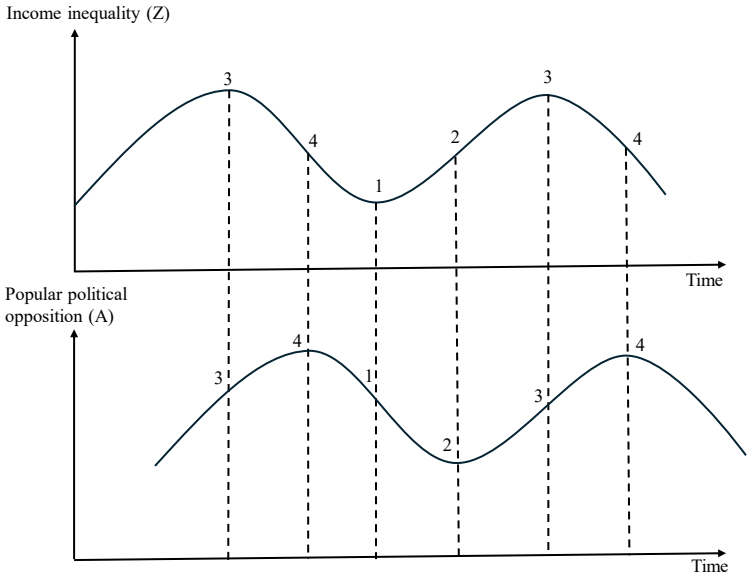
This section explores some of the analytical implications of the model.

7.a The relationship between inequality and popular political opposition

Figure 9 contains an implicit relationship between the state of income inequality and popular political opposition. That relationship is shown in Figure 10. Both state variables fluctuate cyclically, but they are slightly out of phase. Point 3 corresponds to the peak in income inequality, which peaks prior to political opposition. It is rising opposition that causes inequality to peak, and continuing rising opposition that then causes it to fall.

Point 1 corresponds to the bottom of income inequality, but political opposition keeps falling after that bottom as inequality is below the acceptable level. It is tempting to think that peaks and troughs in income inequality will coincide with troughs and peaks in political opposition. However, that is not the case because political opposition is not driven by the current level of inequality, but rather by the gap ($Z \gtrless Z^*$)relative to the norm (Z^*). Thus, the direction of change of political opposition will continue after passing through peak/trough inequality because the gap remains. The gap is akin to a form of momentum that keeps political opposition evolving, causing inequality to cycle back.

Figure 10. The relationship between income inequality (Z) and popular political opposition (A).



The pattern in Figure 10 has lessons for the past and present. As regards the past, US inequality troughed in the late 1970s and then turned up sharply under President Reagan. Many progressive political economists ask why ordinary voters stuck with Reagan given the upturn was evident? The model's answer is that inequality was still below the socially acceptable level ($Z < Z^*$) so that political opposition was still in decline.

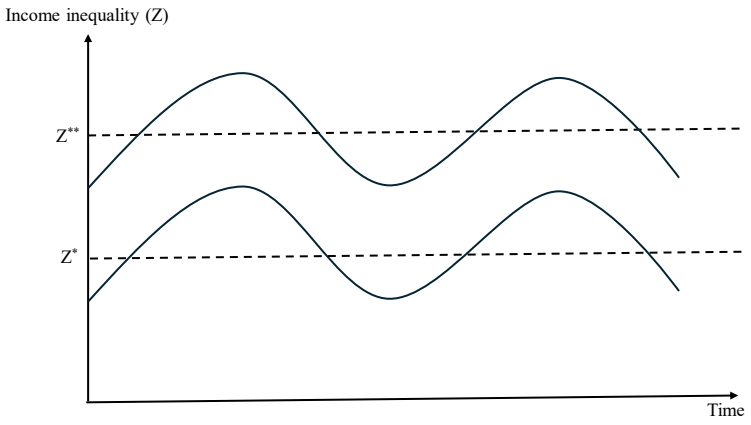
As regards the present, inequality will not have peaked until society is well into a revival of popular political opposition, and it will continue increasing even as that revival picks up steam. In terms of Figure10, the US economy is likely now on segment 2 - 3, and political opposition will need to continue building for inequality to turn down.

7.b The importance of acceptable inequality (Z^*)

Acceptable inequality (Z^*) is a critical parameter in the model, determining the center of gravity around which the economy cycles. Figure 11 describes the effect of an increase in the level of

acceptable inequality to $Z^{**} > Z^{*}$, whereby society becomes more tolerant of inequality. The effect is to shift up the axis around which the economy cycles. The economy continues to experience cyclical fluctuations in inequality, but inequality is higher throughout the cycle. In terms of Figure 9, it is as if the limit cycles shift right.

Figure 11. The effect of an increase in socially acceptable inequality ($Z^{**} > Z^{*}$).



7.c The sensitivity of political opposition to inequality

The sensitivity of organized political opposition to inequality is captured by the partial derivative ($g_Z \geq 0$) of equation (2) with respect to Z. That partial derivative is critical to the behavior of the system as it determines the responsiveness of political opposition to changes in inequality. If the magnitude of the partial derivative is small, then more inequality will develop before sufficient political opposition develops to turn the cycle and start reducing inequality. Conversely, when inequality is falling, a small magnitude means political opposition will decay slowly and more equality (lower inequality) is needed before it decays to a level at which the cycle can reverse direction. In effect, a lower magnitude increases the amplitude of the cycle. In terms of Figure 9,

it increases the radially expands the cycle. Inequality reaches higher peaks and lower troughs, as does popular political opposition.

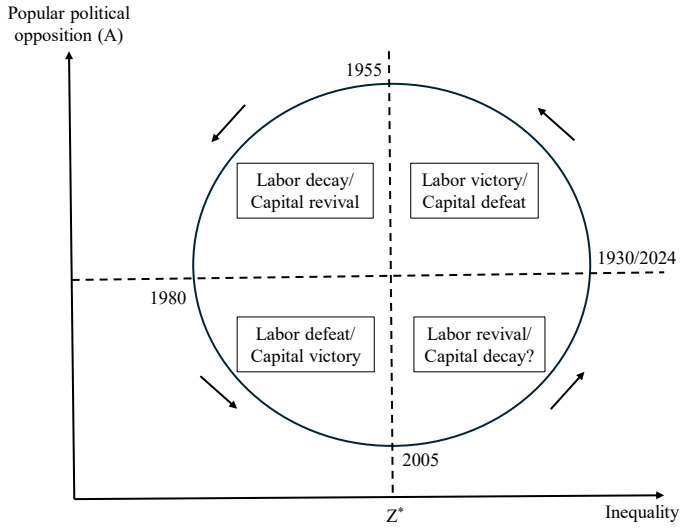
7.d A historical- political interpretation of the model.

The limit cycle model can be given a historical-political interpretation that connects to Figure 4 which shows the historical evolution of inequality in the North Atlantic economies. That figure describes a one-hundred-year cycle in which inequality peaked around 1930, then fell, and thereafter revived to recover its prior peak.

Figure 12 places that history within the limit cycle diagram. The generic model is intended to apply to North Atlantic economies, though the specific timing of turning points will vary by country. Figure 12 can be interpreted as characterizing the US long cycle. There are four twenty-five-year periods, starting in 1930 and ending today (2024). History is represented as moving counter-clockwise. The first period (1930-1955) can be described as one of labor victory and capital defeat, with union density peaking in 1955. The second period (1956-1980) can be described as one of labor decay and capital revival. The third period (1981-2005) corresponded to one of labor defeat and capital victory. The fourth and current period (2006-2024) may correspond to one of capital decay and labor revival. At this stage, the phenomenon of Neoliberalism has been politically articulated and is being intellectually challenged. That was substantially absent in the prior twenty-five period (1980 – 2005) when Social Democracy was confronted by a Neoliberal political tsunami that it struggled to rebut. However, the jury is still out and there are reasons why a labor revival is still in doubt, as discussed below in Section 7.f.[7]

[7] In the US, the elections of Presidents Obama and Biden, the resurgence of public opinion support for unions, and the increased political standing of the left-leaning Senator Sanders and Congresswoman Ocasio-Cortez speak to labor revival. However, the Republican Party's sweep of the 2024 national elections speak against it.

Figure 12. A historical-political interpretation of the model.



The four quadrants in Figure 12 are part of a unified super-cycle mechanism. However, in each quadrant the policy regime and economic institutions will be different, reflecting both the process of institutional technical evolution and changing political conditions associated with the politics of the super-cycle. The proposed framework therefore links to the "varieties of capitalism" discourse (Hall and Soskice, 2001; Palley, 2022). The super-cycle will endogenously generate changes in the policy and institutional complexion of economies that support its different stages.

Lastly, Figure 12 illustrates why Schlesinger's (1939) cycle metaphor is preferrred to Adams' (1890) pendulum metaphor. A swinging pendulum would have society and the economy retracing the ground it had previously travelled, simply reversing developments and reversing the direction of travel. In contrast, a cycle has the economy returning via a different path and being marked by different political economic characteristics along that path.

7.e The political process

The model given by equations (1) and (2) can be interpreted as representing a political economic process that involves the demand and supply of political opposition. That process is illustrated in Figure 13. It starts with the popular demand for political opposition (equation (2)), which then feeds into the supply of popular political opposition (equation (1)). That supply determines the inequality outcome (Z), which feeds back to influence the demand for opposition.

Figure 13. The political process.

Interpreting the system in that fashion introduces considerations that are usually absent in political economy, and it also helps identify in more granular detail the micro-political economic factors driving the process. The supply of political opposition is related to the detailed workings of the political system. Much political economy emphasizes the importance of democracy, but it stops there. However, the generation of political opposition will depend critically on the rules governing democracy. Those rules character will determine the sensitivity of the political system to popular demands, and thereby influence the supply of political opposition.

For instance, the US (in 2024) is a democracy in that the franchise is universal, it holds regular elections, and votes are counted and reported honestly. At the same time, the two political parties constitute a duopoly that offers a quite similar economic policy package, and it also blocks new political entry. That political configuration obstructs and diminishes the supply of political opposition that would change Z.

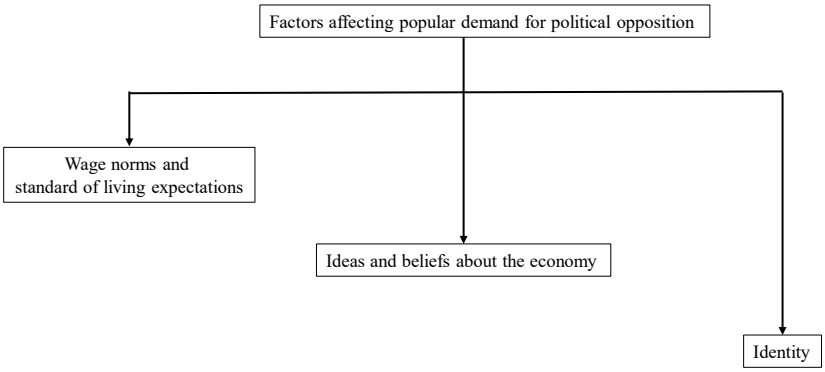
In terms of the model, it is as if the magnitude of the partial derivative f_A is small so that increases in popular political opposition (A) have little effect on inequality. Consequently, the cycle requires a more disgruntled electorate to generate change, which translates into having a cycle of greater amplitude and duration. That also illustrates how the character of the inequality super-cycle may change over time. The cycle can remain operative, but its amplitude and duration can change owing to changes in the underlying political economic system that drives it.

The demand for political opposition will also be affected by changes in society at large. Here, there is need to distinguish between factors affecting the socially acceptable level of inequality (Z^*) and factors affecting the sensitivity of political opposition to conditions (g_Z). Those two are likely to be affected in a similar way by similar factors, but the impact on the super-cycle works differently. Changes in Z^* affect the axis around which the cycle circles. Changes in sensitivity (g_Z) affect the duration and amplitude of the cycle.

Figure 14 shows three possible factors affecting demand for popular political opposition. The first factor is wage norms and standard of living expectations. Higher norms and expectations would tend to lower Z^* and increase g_Z. *Ergo*, the cycle would tend to have lower average inequality over its course due to shift of axis. It would also have reduced amplitude and duration because the demand for opposition would be more responsive to changed conditions, causing the cycle to turn sooner with less extreme conditions. Conversely, diminished

expectations and lowered norms would have the reverse impact.

Figure 14. Some factors affecting popular demand for political opposition.



The second factor is ideas and beliefs about the economy which will tend to affect extent and intensity of political activism. Ideas and beliefs will also shape norms and expectations about standards of living as they will shape beliefs about what constitute fair wages and what the system can sustainably pay. History and historical memory also matters. If people forget about past struggles, they may think there is no need for worker organizations (e.g., unions) and political activism. That will weaken those institutions and rebuilding them will be time-consuming and difficult, and in the meantime the economy will lack the socio-political means to reverse adverse inequality developments. In sum, if people become less Neoliberal and more Social Democratic that will tend to lower Z^* and increase the sensitivity of political demand to inequality (g_Z), and vice-versa.

The third factor is identity which will also affect extent and intensity of political activism. If persons view themselves as working class, they will tend to demand a politics that suits that

identity and will likely be more open to unions. The reverse holds if persons view themselves as consumers rather than workers or middle-class rather than working class. Identity may be affected by social conditions such as whether people live and work in mill towns or in suburbia. Changing identity will in turn also impact political sentiments like "social solidarity". That illustrates how changes in the structure of society brought about by economic development and technology (e.g., highways and cars) can have powerful slow-working effects on the super-cycle. If people have a stronger working-class identity that will also tend to lower Z^* and increase the sensitivity of political demand to inequality (g_Z).

As with the supply of politics, the demand for politics introduces factors that are not usually considered part of economic models, yet which are critical for political economic models in which the political process is a driving variable.

History is also present in that the parameters of the cycle and the sensitivity of behaviors may change. In the Neoliberal era (1980-today), the three above discussed factors have all evolved a way that has contributed to raising the socially acceptable level of inequality and weakening the responsive of popular demand for political opposition, thereby increasing the super-cycle's amplitude and duration. In terms of Figure A, that helps explain the weakness of development over the last twenty years (2005-2024).

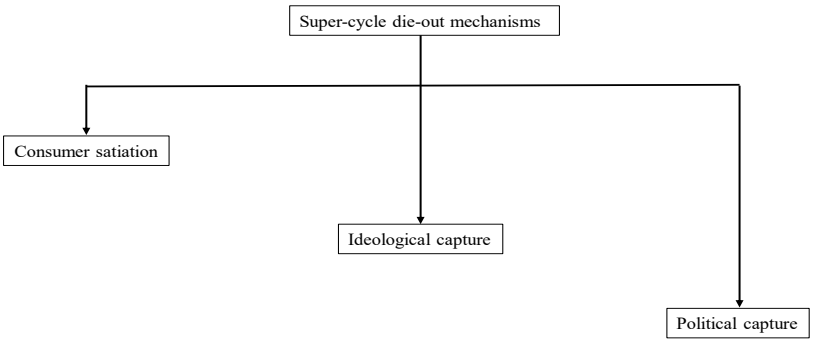
7.f Could the super-cycle die out?

The above arguments suggest that it is possible the super-cycle could die out. Analytically, there are two channels whereby this can happen. The first is if popular political demand for opposition becomes insensitive to inequality conditions so that $g_Z = 0$. In that case worsening inequality will not galvanize political opposition, and there will be no mechanism for turning around policies and understandings that foster inequality. The second is if political supply becomes insensitive to

popular political demand for opposition so that $f_A = 0$. In that case, even though there is popular demand for change, the socio-political system fails to deliver on that demand and leaves existing policies and practices in place. Under both circumstances, inequality would be unrestrained from increasing and it would increase until rich elites could squeeze no more out of the system($f_Z = 0$).

Figure 15 illustrates three possible mechanisms whereby the super-cycle might die out. The first is consumer satiation. The super-cycle takes place against a background of economic growth which tends to raise absolute incomes (i.e., the purchasing power of wages), even as distribution is shifting over the course of the cycle. That poses the possibility workers' absolute income may eventually rise to a level at which workers are sufficiently satisfied with their standard of living, so that the impetus for class struggle atrophies and the cycle dies out. Absolute income may reach a level whereby "basic comforts plus" are provided for, and workers cease being so concerned with income and income distribution. In that connection, a stylized fact of the happiness literature (Kahneman and Deaton, 2010) is that emotional well-being (i.e., happiness) ceases to improve once income rises above $75,000.

Figure 15. Super-cycle die-out mechanisms.



That damping proclivity may also be reinforced by globalization. Thus, workers in advanced economies (e.g., the US) may become more aware of the condition of workers in developing economies, and they may recognize how comparatively well-off they are. In effect, workers in advanced economies may begin to compare themselves both "down" (i.e., versus foreign workers) and "up" (i.e., versus domestic capitalists), and that may mute their demands.

In that event, the cycle may die out as worsening income distribution will not revive class struggle, and there will be no mechanism to reverse the worsening and set in train a reversal. The implications are shown in Figures 16.a and 16.b. Figure 16.a shows the super-cycle. Figure 16.b shows how the death of class struggle would affect the super-cycle. There is a weaking of the mechanism taming the cycle once absolute wage income has risen sufficiently because workers become disengaged from class struggle. Consequently, the political economic pressure for lowering income inequality dissipates and income inequality can increase to its upper bound, as determined by capitalist power.

Figure 16.a and 16.b. The impact on the super-cycle of the death of class struggle.

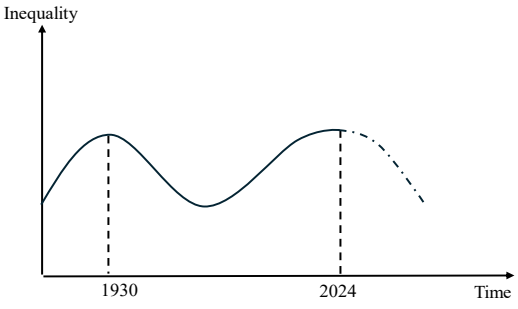


Figure 16.a. The super-cycle cycle.

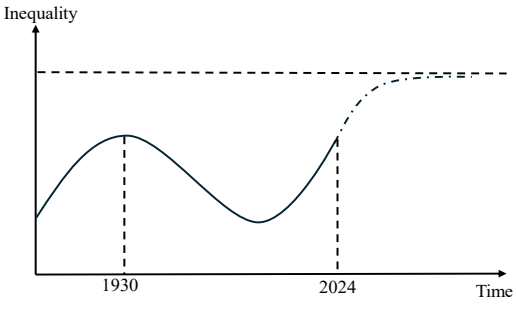


Figure 16.b. Death of the super-cycle.

A second die-out mechanism is ideological capture, which can be viewed as operating on

both sides of the class struggle line. As regards workers, they may come to believe in free market doctrines and view interventions on their behalf (e.g., right to organize and join unions, minimum wage laws, employment rights, etc.) as unneeded and even counter-productive to their interests. They see themselves as consumers rather than workers, which connects to Marcuse's (1964) problematic of "one-dimensional man". In the language of Marxian sociology, workers develop "false consciousness" which undercuts their drive to counter rising inequality.

On the other side of the divide, ideological capture may weaken middle-class and elite liberal support for such interventions. Ideological hegemony may also strengthen the resolve and opposition of rich anti-worker elites. The net result is the cyclical force responding to and countering the rise in inequality is suffocated, and system may lack the ability to cause a reversal. *Ergo*, it may flatline with high inequality.

The third die-out mechanism is political capture. Politically driven policy is a central mechanism driving the cycle, with citizens having the power to change the direction of policy and behaviors of corporations. That mechanism can become stymied if politics is captured, thereby blocking policy and corporate behavior change. Such capture may characterize the existing political system, particularly that of the US and the UK. Those countries are characterized by a two-party political duopoly, and both parties have been captured by Neoliberalism. Palley (2012, p.156-161) refers to the center-right party being captured by "hardcore" Neoliberalism, while the center-left party has been captured by "soft-core" or "compassionate" Neoliberalism. The latter is associated with the Third Way political movement pushed by US President Bill Clinton and UK Prime Minister Tony Blair in the late 1990s.

Additionally, the two-party system is accompanied by a plurality winner take-all voting system, rather than a majority voting system. In the former, the party with the largest number of

votes wins regardless of whether it has a majority (50 percent plus one vote). That system serves to block new political entry, thereby supporting the captured duopoly. In that event, the system may again flatline and live with high inequality, with demand for change being stymied by the capture of political institutions. However, political capture will differ importantly from ideological capture. With ideological capture voters willingly consent to the presence of enduring high inequality. With political capture, voters may resent and want to reduce high inequality, but they lack the political means of doing so.

7.g Relation of the super-cycle to shorter business cycles

Another issue is the relation of the super-cycle to shorter business cycles. The former is an ultra-long cycle in which multiple shorter business cycles occur. The four-quadrant diagram in Figure 12 suggests shorter cycles are likely to have a changing complexion, reflecting the quadrant in which they occur.

One widely accredited short cycle is the Goodwin cycle (Goodwin, 1967) in which the labor share fluctuates pro-cyclically. One might expect the Goodwin cycle to be strong in the segment with labor victory/capital defeat. It would then weaken in the segment labor decay/capital revival. Thereafter, it would tend to disappear in the segment labor defeat/capital victory, and it would make a strengthening comeback in the segment labor revival/capital decay. That possibility can help explain recent econometric findings that the Goodwin cycle has disappeared (Setterfield, 2023).

7.h Marginal productivity theory reconsidered

By way of closing the analysis, it is worth returning to the issue of marginal productivity theory which was addressed in Section 4. Progressive economists have long criticized marginal productivity as smacking of a justification for the pattern of income distribution as much as an

explanation. Factors are paid the value of their contribution to output, given perfect competition.

However, there is another detrimental aspect to marginal productivity which is less appreciated and has significantly impeded economics from theorizing the economy as a social organization. Rooting income distribution in marginal productivity renders distribution a technological phenomenon, being determined by the state of technology combined with relative supplies of capital and labor. That formulation takes the social off the table.[8]

That exclusion of the social has been fundamentally problematic for the theory of the Kuznets curve and for the development of a plausible political economic long-run theory of income distribution. Kuznets (1955) claimed that socio-political factors matter for the determination of income inequality, albeit that he did not emphasize that point. A&R (2000) emphasize the role of the expansion of democracy in causing the Kuznets curve to turn down. However, they remain wedded to marginal productivity theory, so their theory is made to work via the impact of democracy on taxes and transfers which keeps it consistent with marginal productivity theory.

However, if the effect of socio-political factors on income distribution works via such channels as labor laws, union membership, minimum wages, etc., that renders problematic being on the right-hand side of the Kuznets curve. That is because, according to marginal productivity theory, such interventions are an economic distortion that diminish economic activity and well-being. The implication is being on the right-hand side of the Kuznets curve corresponds to an inefficient economic situation.

[8] Marglin (1974) and Bowles and Gintis (1990) introduce a social dimension to the conventional story by arguing technology is socially determined. That does introduce the social but, in this author's view, that treatment remains trapped in the orbit of marginal productivity theory and is more akin to a loophole escape clause. It does not render income distribution fundamentally social in the sense that given existing technology, social forces are non-operative re determination of income distribution for that technology.

Rejecting marginal productivity theory frees economic analysis of that implication. Being on the right-hand side of the Kuznets curve does not automatically correspond to an economically inefficient position, and nor is there any reason to believe points along the super-cycle distribution path vary by degree of efficiency. They only vary in the subjective perceptions and criteria applied to determine distribution, as argued above.

Accepting that reality does not mean anything goes. Enterprises are constrained to at least break-even, and most are constrained to make the required rate of return set by investors and financial markets. Competition for resources will also determine what enterprises pay factors, but that reflects competition not marginal productivity. The willingness to pay in markets will be determined by commonly held views and beliefs about what factors are worth.

The situation is illustrated by the economics of a university economics department. Senior professors are paid more than junior professors. It is impossible to identify the marginal product of each type to establish their contribution to the university. There are even sound reasons to believe junior professors may be more productive. Yet, there is a convention that senior professors are paid more. That convention is supported by the belief seniors have a higher marginal product. It is also supported by the institutional power held by seniors in the department, and it is further supported by the support senior economics professors get from senior professors in other departments. What is clear is the claim of a higher marginal product is unverifiable and disputable.

Moreover, even if senior professors can command a higher salary in the open market, that does not resolve the issue. Instead, it merely shows the presence and operation of all the above forces and conventions in universities elsewhere, which has them adopting similar value attribution rules.

It is this type of microeconomic framework which girds the political economic model of distribution outlined in Section 6. The critically important feature is it means distribution is not locked-down and determined by technology. Instead, there is great latitude for social forces to intervene, subject to the requirement of enterprises being viable. Observed changes in distribution brought about by such forces do not make them inefficient. Instead, they reflect changes in the value attribution system. Making claims about efficiency and factor payments requires being able to objectively identify factors' marginal products, and that is a will-o'-the-wisp. That is easily proved by economists' own practices in economics departments.

8. Conclusion

This paper has presented a theory and model of long-run cycles of income distribution and inequality. The model explains the historical pattern of income distribution identified by Kuznets (1955) and Piketty (2014). It breaks with conventional marginal product theory which has functional income distribution being determined by the technological conditions of production. Instead, the model emphasizes the role of socio-political forces that shape and drive fluctuations in the level of popular political organizations, which then impact distribution. The model provides a framework for interpreting the historical evolution of income distribution and inequality, and for reflecting on current conditions and possible future developments. The core message is twofold. First, socio-political developments matter for income distribution. Second, if those developments are cyclical, income distribution will also exhibit cyclicality.

References

Acemoglu, D. and Robinson, J.A. (2000), "Why did the West extend the franchise? Democracy, inequality, and growth in historical perspective," *Quarterly Journal of Economics*, 115(4), 587-607.

---------- (2012), *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*, New York, NY: Crown Business.

Adams, H. (1921 [1890]), *A History of the United States of America During the First Administration of James Madison*, New York, NY: Charles Scribner's Sons. Galbraith 1998

Atkinson, A., Rainwater, L., and T. Smeeding (1995), *Income Distribution in OECD Countries*, Paris: OECD.

Bowles S. and Gintis H. (1990), "Contested exchange: new microfoundations for the political economy of capitalism," *Politics & Society*, 18 (2), 165-222.

Burgin, A. (2012), *The Great Persuasion: Reinventing Free Markets since the Great Depression*, Cambridge, MA: Harvard University Press.

Carter, Z. D. (2020), *The Price of Peace: Money, Democracy, and the Life of John Maynard Keynes*, New York, NY: Random House.

Duesenberry, J.S. (1949) *Income, Saving and the Theory of Consumption Behavior* (Cambridge, Mass.: Harvard University Press).

Galbraith, J. K. (1998), *Created Unequal: The Crisis in American Pay*, New York, NY: Simon & Schuster.

Gechert, S., Havranek, T., Isrova, Z. and D. Kolcunova (2022), "Measuring capital-labor substitution: the importance of method choices and publication bias," *Review of Economic Dynamics*, 45 (July), 55-82.

Goodwin, R.M., "A growth cycle," in Feinstein, C.H. (ed.), *Capitalism and Economic Growth*, Cambridge: Cambridge University Press, 1967, 54-58.

Hirschman, D. (2021), "Rediscovering the 1%: knowledge infrastructure and the stylized facts of inequality," *American Journal of Sociology*, 127(3), 739-786.

Hall, P.A. and D. Soskice (2001), 'An introduction to varieties of capitalism', in *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, in P. A. Hall and D. Soskice (eds.), Oxford: Oxford University Press, 1-70.

Kahneman, D. and Deaton, D. (2010), "High income improves evaluation of life but not emotional well-being," *Proceedings of National Academy of Science*, 107, 16489-16493.

Kaldor, N. (1963), “Capital accumulation and economic growth” in Lutz, F. A. and Hague, D. C. (Eds.), *The Theory of Capital: Proceedings of a Conference held by the International Economic Association*, London, UK: MacMillan and Co. Ltd, 77-122.

Kuznets, S. (1955), “Economic growth and income inequality,” *American Economic Review*, XLV (1), 1-28.

Marcuse, H. (1964), *One-Dimesional Man*, Boston, MA: Beacon Press.

Marglin, S. A. (1974), “What do bosses do? The origins and functions of hierarchy in capitalist production,” *Review of Radical Political Economics*, 6(2), 60-122.

Oeskes, M. and W. M. Conway (2023), *The Big Myth: How American Business Taught Us to Loathe Government and Love the Free Market*, New York: Bloomsbury Publishing.

Palley, T.I. (1996), “Out of the Closet: The Political Economy of Neo-classical Distribution Theory,” *Review of Radical Political Economics*, 28, 57-76.

---------- (1998), *Plenty of Nothing: The Downsizing of the American Dream and the Case for Structural Keynesianism*, Princeton, NJ: Princeton University Press.

---------- (2007), ““Financialization: What It is and Why It Matters,” Working Paper No. 525, The Jerome Levy Economics Institute, Bard College, New York. Also published in Hein, Niechoj, Spahn, and Truger (eds.). *Finance-led Capitalism: Macroeconomic Effects of Changes in the Financial Sector*, Metropolis-Verlag: Marburg, Germany, 2008, p.29 – 60.

---------- (2010), “The Relative Permanent Income Theory of Consumption: A Synthetic Keynes-Duesenberry-Friedman Model,” *Review of Political Economy*, 1 (January 2010), 41- 56.

---------- (2012), *From Financial Crisis to Stagnation: The Destruction of Shared Prosperity and the Role of Economics*, Cambridge University Press, February 2012.

---------- (2022), “Theorizing varieties of capitalism: economics and the fallacy that ‘There is no alternative (TINA)’”, *Review of Keynesian Economics*, 10(2), 129-166.

Palley, T.I. and LaJeunesse, R. (2007), “Social Attitudes, Labor Law, and Union Organizing: A Socio-Economic Model of Union Density,” *Journal of Economic Behavior and Organization*, 62, 237-254.

Phillips-Fein, K. (2010), *Invisible Hands: The Businessmen’s Crusade Against the New Deal*, New York: W.W. Norton & Company.

Piketty, T. (2014), *Capital in the Twenty-First Century*, Cambridge, MA: The Belknap Press of Harvard University.

---------- (2003), “Income inequality in France, 1901-1998,” *Journal of Political Economy*, 111(5), 1004-1042.

Piketty, T. and Saez, E. (2003), “Income inequality and the United States, 1913 – 1998,” *Quarterly Journal of Economics*, 118(1), 1-41.

Pressman, S. (2016), Understanding Piketty’s *Capital in the Twenty-First Century*, Routledge: New York.

Schlesinger, A. M., Sr. (1939), “Tides of American politics,” *The Yale Review: A National Quarterly*, Winter 1940 issue, published December 1, 1939. https://yalereview.org/article/arthur-m-schlesinger-sr-tides-american-politics

Schlesinger, A. M., Jr. (1986), *The Cycles of American History*, New York, NY: Houghton Mifflin Company.

Setterfield, M. (2023), “Whatever happened to the ‘Goodwin pattern’? Profit squeeze dynamic in the modern American labor market,” *Review of Political Economy*, 35(1), 263-286.

Stelzner, M. (2014), “Political contest, policy control, and inequality in the United States,” *Review of Keynesian Economics*, 2(3), 365-383.

Imprint

Publisher
Macroeconomic Policy Institute (IMK) of Hans-Böckler-Foundation, Georg-Glock-Str. 18,
40474 Düsseldorf, Contact: fmm@boeckler.de, https://www.fmm-macro.net

FMM Working Paper is an irregular online publication series available at:
https://www.boeckler.de/de/fmm-working-paper-22457.htm

The views expressed in this paper do not necessarily reflect those of the IMK or the Hans-Böckler-Foundation.

ISSN 2512-8655

This publication is licensed under the Creative commons license:
Attribution 4.0 International (CC BY).

Provided that the author's name is acknowledged, this license permits the editing, reproduction and distribution of the material in any format or medium for any purpose, including commercial use.
The complete license text can be found here: https://creativecommons.org/licenses/by/4.0/legalcode
The terms of the Creative Commons License apply to original material only. The re-use of material from other sources (marked with source) such as graphs, tables, photos and texts may require further permission from the copyright holder.