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Kuznets at 70

The enduring significance of a curve and a hypothesis

James Galbraith,¹ Ravi Kanbur,² Kunal Sen,³ and Andy Sumner⁴

June 2025

Abstract: Seven decades ago, Simon Kuznets put forward the hypothesis that as economies developed, national inequality would first increase and then decrease—an inverted U-shape. He provided preliminary evidence for the hypothesis on the basis of the limited data available at the time, and theorized the genesis of the curve as arising from the twin forces of structural transformation of the economy and political economy pressures. Seven decades on, the Kuznets curve still has a hold on the development discourse as new data is used to test the hypothesis, new theories are elaborated to explain the evolution of inequality, and the metaphor of an inverse U-shape is extended beyond its original realm of national inequality. With this rich history and background, the time is right to examine the Kuznets curve literature broadly construed. This overview takes stock of what has been learned and highlights emerging research and policy questions.

Key words: Kuznets, inequality, inverted U, structural transformation, political economy

JEL classification: D31, O15, O40

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1 Introduction

Seven decades after it was first introduced by Simon Kuznets in 1955, what became known as the Kuznets curve still has a hold on development discourse. Its simplest and starkest statement is of course that as development proceeds, inequality of income (or more precisely pay, since Kuznets excluded landowners and rents from his hypothesis) within a country first increases and then decreases—the famous inverted U. Kuznets specifically associated this evolution with the processes of urbanization and industrialization, rooted in the simple point of departure that unless industrial jobs and urban life pay better than farming, peasant farmers will not give up their land and livelihoods for something else. Thus, pay inequality necessarily rises as industrialization begins. But the process of increasing inequality is self-limiting, since the weight of the low-income rural sector in the whole population eventually declines, while (Kuznets foresaw) the institutions of social democracy and collective bargaining eventually bear on the inequalities of urban and industrial life.

The specific hypothesis of an inverted U continues to be subjected to empirical review as new data becomes available; indeed, the search for Kuznets-style relationships has been a regular hobby of developmental econometricians. There has been much discussion of whether the Kuznets curve is an iron law and whether policies can influence the trajectory of inequality. There has also been discussion of the effects of globalization on the shape of the curve, especially as some countries specialize in very-high-income export sectors such as finance, advanced technology, and oil—imparting an upward-sloping right tail to the inverted U. At the same time, the Kuznets curve as a metaphor has shaped the discourse, going beyond national inequality to the evolution of global inequality, and to areas outside strictly economic inequality, such as the environmental Kuznets curve, or as in the work of Angus Deaton (2015), the diffusion of improvements to public health.

With this rich history and background, the time is right to examine the Kuznets curve literature broadly construed. This overview takes stock of what has been learned and highlights emerging research and policy questions. It also weaves in the findings of papers presented at the ‘Kuznets at 70’ symposium organized by UNU-WIDER, Cornell University, and Kings College London (UNU-WIDER 2024).

The plan of the paper is as follows. Section 2 reviews the literature on national Kuznets curves as sought for in economic statistics. Section 3 takes up the underlying phenomena of structural transformation. Section 4 deals with related issues of political economy, and Section 5 with extensions of the Kuznets metaphor to inequality of opportunity, global inequality, and environmental transition. Section 6 concludes.

2 The national Kuznets curve

Kuznets (1955) argued that with the process of economic development, as workers moved from agriculture—a sector with low average incomes—to manufacturing and services—sectors with higher average incomes—inequality would increase first, and then fall once most workers had moved to the higher-income sectors and the weight of the low-income rural sector was correspondingly reduced. Kuznets postulated that this process would lead to an inverted U-shaped relationship between inequality and per capita income—the Kuznets curve. Kuznets also suggested that the turning part of the U and the steepness of the curve, in both its upward and downward trajectories, would be

influenced by policies of redistribution and other factors, so the Kuznets curve would differ in its precise contours from one country to the next.

There is a large empirical literature that has examined the inverted-U relationship between inequality and per capita income. Much of the early literature estimated cross-country regressions of inequality and per capita income (see Ahluwalia 1976). However, as noted by Kanbur (2012), the Kuznets curve expresses a hypothesis about change in *within-country* inequality *over time*. Thus, cross-country data may fail to capture an inverted-U relationship, or may capture a relationship that is spurious from the standpoint of Kuznets's underlying hypothesis of structural change.

The difficulty of searching for an inverted U in national data is the requirement for consistent national measures of inequality over time—measures that are far more prevalent among countries already past the early stages of industrialization than for countries at or near the beginning of that process. Yet some studies do exist. Among the recent ones are Ravallion and Chen (2021) and J. Zhang (2021) for China, and Alvaredo et al. (2023) for several Central and Latin American countries. For China, J. Zhang (2021: 1192) notes that 'although China's rapid economic growth resembles the high-growth period of its Asian neighbors, the evolution of inequality in China has more in common with the United States and perhaps other Western countries in their earlier development stages'. Therefore, the Kuznets hypothesis seems to apply to China in the past four decades, as previously argued by W. Zhang (2014). Furthermore, the Kuznets argument that urban income disparities can explain overall inequality seems to be supported in the case of China, with a strong positive correlation between the (household income) Gini and urban-rural income disparity (Zhang 2021). Ravallion and Chen (2021) extend the analysis to a different measure of inequality—mean log deviation—and find that the Kuznets hypothesis has held since the 1990s, although they argue that the data does not support the argument that the urbanization process has been driving up urban-rural disparities. It may be noted that the Chinese reforms began with agricultural reforms and rapidly rising incomes in the countryside, which could account for this pattern in the Chinese case.

Alvaredo et al. (2023) study the evolution of inequality for 34 Central and Latin American countries from the 1950s onwards. They find that a common pattern is the inverted U-shape, with inequality rising in most countries till the 1990s and then falling during the early 21st century. They argue that the rise in inequality could be attributed to market liberalization policies, and the fall in inequality could be due to social policies enacted by inequality-averse national governments and the equalizing effect of educational attainment across most of the workforce.¹ The Latin American example shows that policies can make a difference in exacerbating inequality as well as reducing it.

A limitation of the research on the Kuznets curve has been the lack of reliable time-series data on income inequality over time, especially for developing countries. Recently, UNU-WIDER has released a new data set on global inequality—the WIID Companion (UNU-WIDER 2022a)—that is based on the WIID (see UNU-WIDER 2022b). The WIID Companion provides time-series data on inequality for many developing countries for a sufficiently long period to undertake econometric analysis (the data start from the early 1950s in several country cases).² To provide standardized measures of inequality

¹ To this one may add the reduction in global interest rates and the boom in commodity demand, largely from China, as favourable factors in the early 2000s (International Monetary Fund 2018).

² The WIID has more than 20,000 data points and collects information on income inequality for 197 countries over the longest possible period for which reliable data is available (Gradin 2024).

that are comparable over time and across countries, the WIID Companion converts all available data on inequality from public sources for both developed and developing countries to the same welfare concept—net income per capita.³ Thus, the WIID Companion offers an opportunity to revisit national Kuznets curves for a range of countries.⁴ However, it is important to note that measures of net income will include rental and profit incomes, explicitly excluded by Kuznets from his hypothesis, so that even with improved survey records the mapping of data onto theory will not be exact.

Using the WIID Companion and time-series data from the early 1950s to the 2010s, we examine whether there exists an inverted-U relationship between the net income Gini and per capita income for selected developed and developing countries.⁵ The developing countries we consider are the large emerging economies—Brazil, China, Indonesia, India, the Republic of Korea, and South Africa. We also include the two countries studied by Kuznets (1955)—the United Kingdom and United States—and a country known for its egalitarian policies, Sweden. Figures 1–9 present the national Kuznets curves for Brazil, China, Indonesia, India, Republic of Korea, South Africa, Sweden, United Kingdom, and United States.

The only two countries where an inverted U is clearly observed in this data are Brazil and the Republic of Korea. For China, as argued above, other evidence strongly supports a Kuznets process from the start of the reform period until at least 2012, with the decline beginning in the first decade of the new century. For India, it seems that rising inequality, which accelerated with the reforms of 1992 (Galbraith et al. 2004), has not yet come to a peak. The same appears to be true for Indonesia. The experience of rising inequality in two advanced economies—the United Kingdom and United States—can be attributed to the rising dominance of the very highly paid and globalized financial and information technology sectors in both countries, along with the large share of capital incomes, so that inequality increases rather than declines with growth. Sweden poses an interesting case, as it does not observe the same rise in inequality as United Kingdom and United States. The rise in inequality in South Africa is not particularly pronounced; however, it has among the highest levels of income inequality in the world to start with.⁶

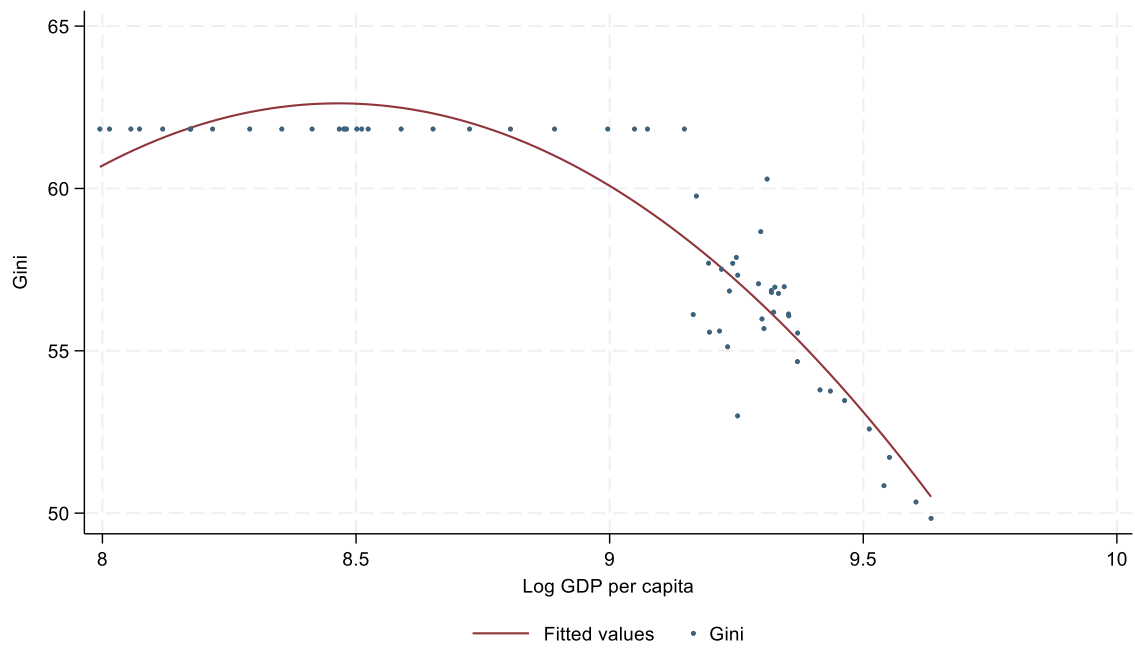
³ Gradin (2021) notes that half of the publicly available inequality measures needed to be adjusted as they were compiled from consumption or gross income data, or were not in per capita terms.

⁴ It should be noted that the original Kuznets argument in his 1955 paper was about the relationship between structural transformation and inequality (see Baymul and Sen 2020; Kanbur 2017). Per capita income is imperfectly correlated with structural transformation (Sen 2023). Keijzer and Sen (2025) use direct measures of structural transformation, such as manufacturing employment share in total employment or non-agricultural employment share in total employment, and show that the Kuznets curve derived from structural transformation data may not be the same as the curve obtained from income data.

⁵ Per capita income is at 2017 US dollar purchasing power parity prices, and obtained from the World Bank's World Development Indicators. Keijzer and Sen (2025) also present Kuznets curves using different measures of inequality—the Palma ratio and the share of the top ten per cent of income.

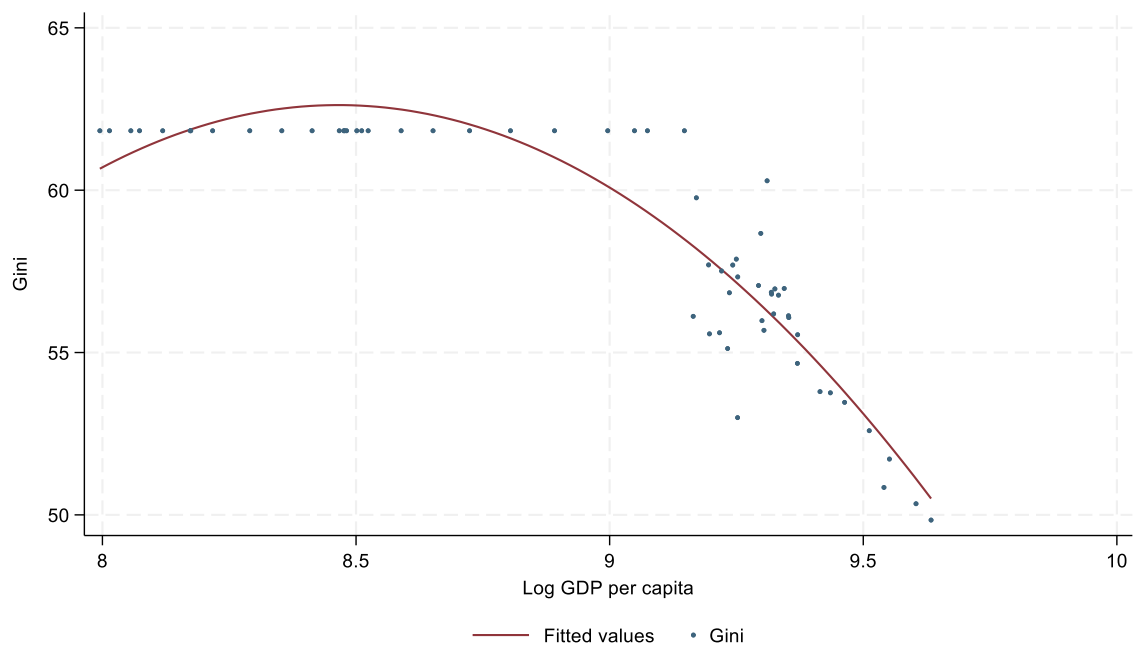
⁶ In the South African case, the fact that a large share of survey respondents report zero household income has the apparent effect of raising the reported Gini coefficient dramatically.

Figure 1: The national Kuznets curve for Brazil



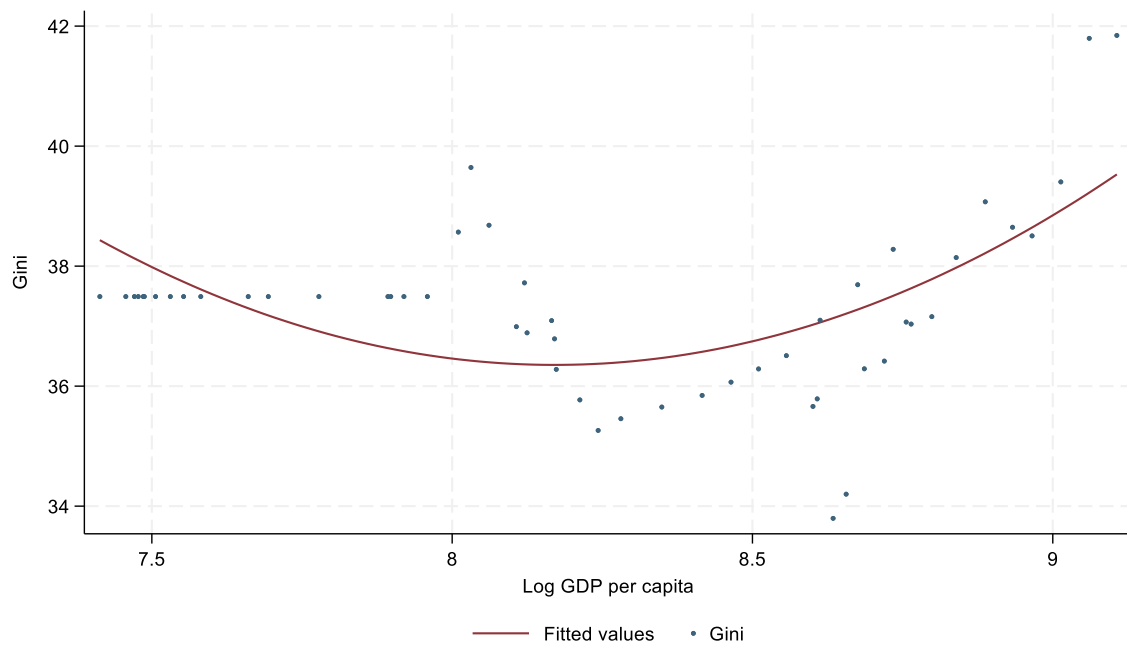
Source: Keijzer and Sen (2025).

Figure 2: The national Kuznets curve for China



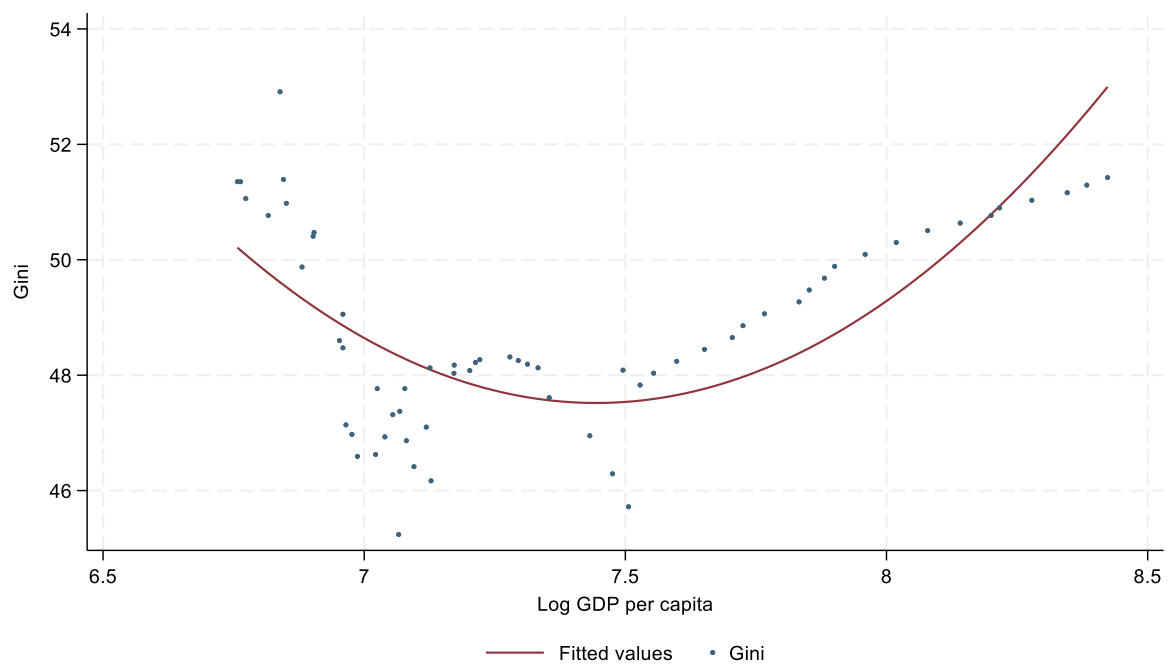
Source: Keijzer and Sen (2025).

Figure 3: The national Kuznets curve for Indonesia



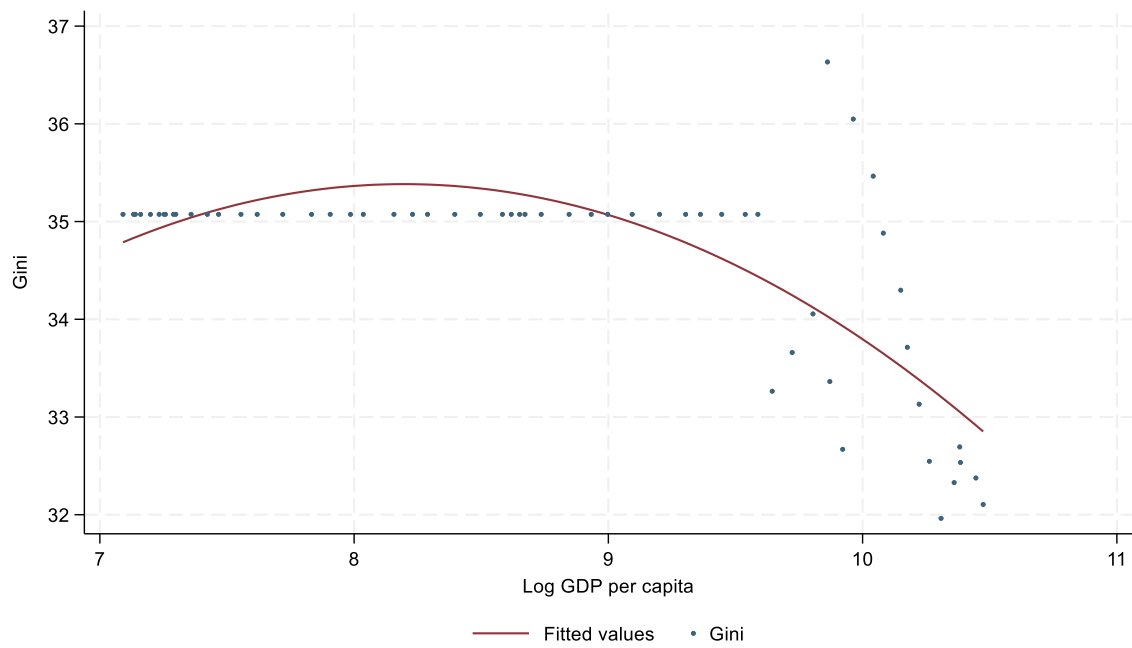
Source: Keijzer and Sen (2025).

Figure 4: The national Kuznets curve for India



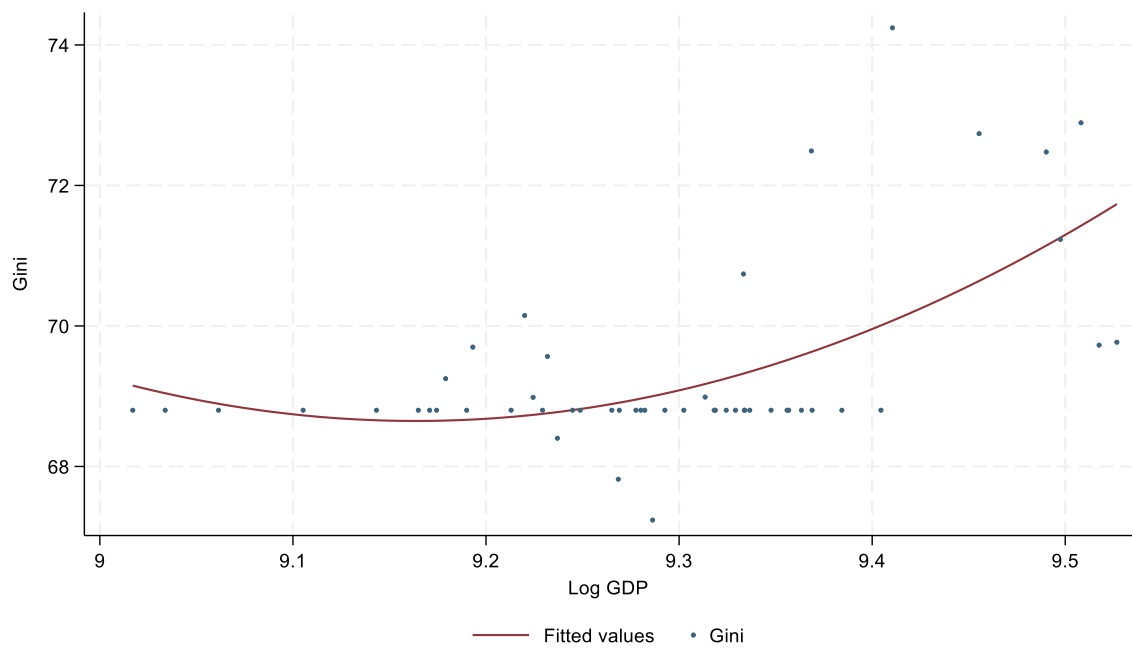
Source: Keijzer and Sen (2025).

Figure 5: The national Kuznets curve for the Republic of Korea



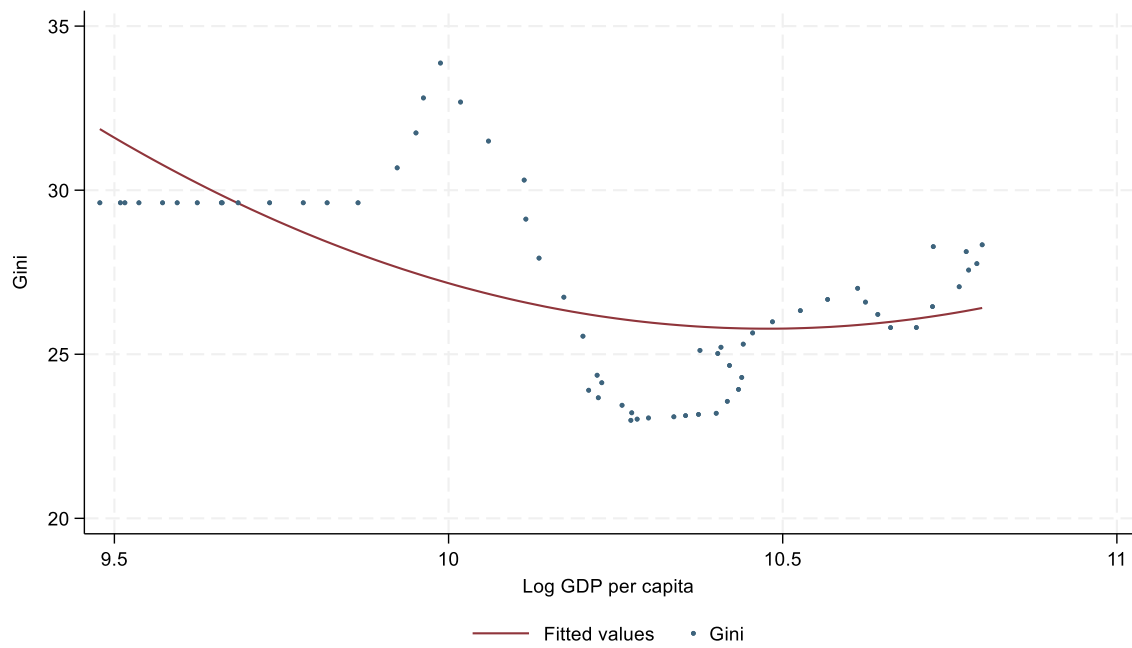
Source: Keijzer and Sen (2025).

Figure 6: The national Kuznets curve for South Africa



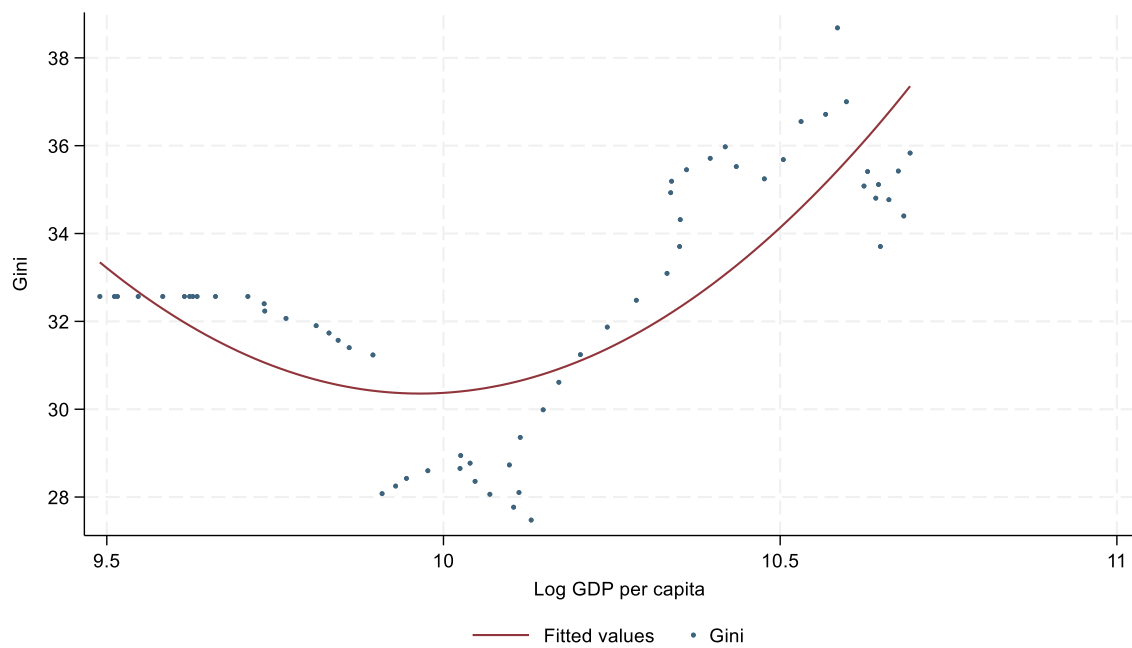
Source: Keijzer and Sen (2025).

Figure 7: The national Kuznets curve for Sweden



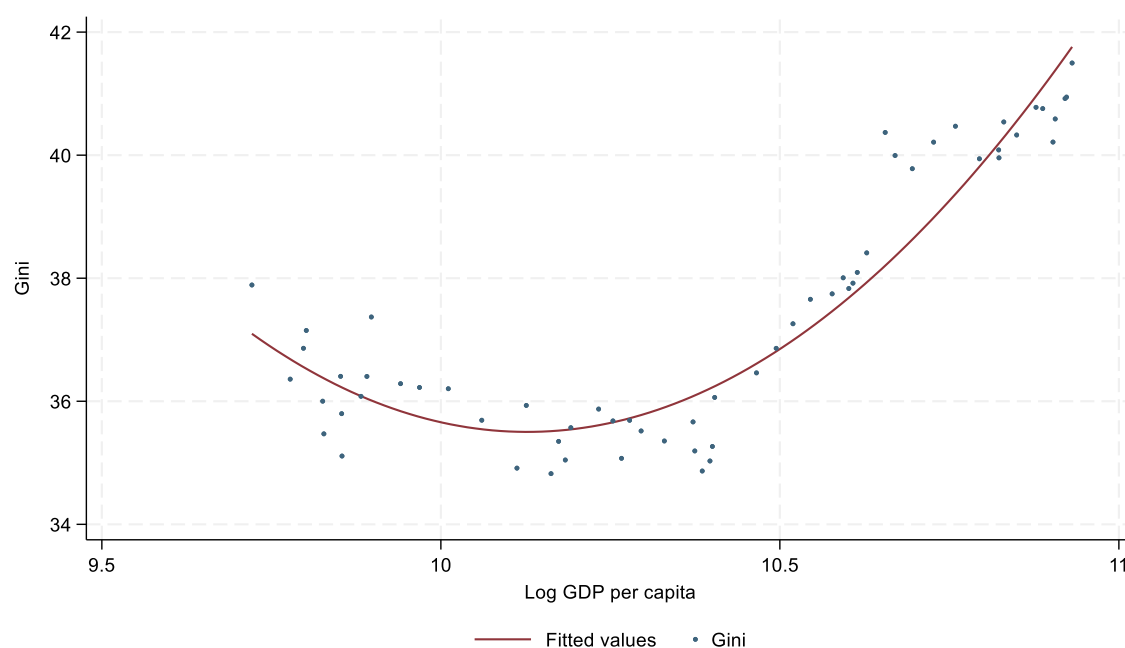
Source: Keijzer and Sen (2025).

Figure 8: The national Kuznets curve for the United Kingdom



Source: Keijzer and Sen (2025).

Figure 9: The national Kuznets curve for the United States



Source: Keijzer and Sen (2025).

In the cases of Brazil and the Republic of Korea, the decline of inequality with increases in per capita income can be attributed in part to minimum wage increases in Brazil and a redistributive policy mix along with an equalizing skill premium in Korea (on Brazil see Alvaredo et al. 2023; on the Republic of Korea see İşcan and Lim 2022). However, Calmon et al. (2000) argue that the movement of inequality for Brazil (and Mexico) is closely correlated to the growth rate as such—a growth rate more rapid than the growth of the labour force reduces pay inequality, and conversely, in hard times inequality rises.

Overall, the evidence for the national Kuznets curve remains mixed. It is strongest in large countries (such as China, India, and Brazil) and in periods when the transition from rural to urban life and from agriculture towards industry is most apparent. But the pattern is not universal. It is affected by national policy and by international factors, such as global financial forces and imposed policies of liberalization, neither of which figured in Kuznets's time. Inequality may rise or fall with economic development and growth, and may not necessarily fall at higher levels of per capita income. In the wealthiest countries, the era of Kuznets-style equalization is evidently over, and the relationship between income growth and inequality change may be quite different from that which Kuznets foresaw. In a few cases (notably Sweden), the force of egalitarian institutions may still hold inequality down in the face of a disequalizing world. As noted by Roine and Waldenström (2015: 552), the evidence suggests that 'that there is no mechanical relationship between inequality and industrialization or technological change'. It is no detraction from the force of Kuznets' 1955 hypothesis, or the depth of his insight, to observe that the world has changed.

3 Structural transformation and inequality

Seventy years after Kuznets's seminal paper, the relationship between structural transformation and income inequality remains an important concern in development economics. Kuznets hypothesized an inverted U-curve whereby inequality would first rise and then fall as economies transitioned from rural to urban and from agriculture to industry. The translation of this insight into the Kuznets curve, while influential, relied on simplifying assumptions—most notably the idea of an initially egalitarian agrarian sector (which only exists where agriculture is dominated by small freeholders) and the exclusion of elites whose incomes were not derived from labour. It can thus be seen as a stylized hypothesis suitable perhaps to northern North America in the 19th century, and to China after the revolution, but hardly to the transition from feudal agriculture, slave plantations, or latifundia. In such cases it needs to be seen primarily as a heuristic, although Kuznets's crucial insight, that structural transformation drives the evolution of inequality, remains powerful.

Since the late 1990s, the data available to assess the Kuznets hypothesis has improved, especially since WIID which was launched in 1997. A growing body of empirical research has evolved driven by something closer to, although still far from, Kuznets's (1955: 2) detailed 'statistical economist's pipe dream'.⁷

This section surveys the evolution since 1997 of research on structural transformation and income inequality in terms of two approaches to Kuznets's 'sectors': first, urban/rural sectors (faithful to Kuznets); second, economic production sectors (implied by Kuznets, although more associated with Kuznets's contemporaries, such as Lewis, Furtado, and others). The survey focuses on low- and middle-income countries (given Kuznets's concern with rising inequality in the early stages of economic development), and attention is paid to what can be called the Kuznets mechanism, namely, that overall national inequality is an aggregation of *between* sectors (e.g., rural versus urban) and *within* sectors (e.g., wage dispersion among urban workers). Overall national inequality is thus a function of mean income in each sector, the population weight of each sector, and the income distribution in each sector. This analytical distinction means aggregate national inequality may rise due to growing income gaps between sectors or within sectors and movements between sectors (as Kuznets himself noted) or a combination (see Kanbur 2017).

This section is structured as follows. First, it discusses structural transformation and income inequality in terms of urbanization. Second, it discusses structural transformation and income inequality in terms of industrialization.

3.1 Urbanization and inequality

Urbanization remains a central feature of structural transformation. From a theoretical perspective, Glaeser (1998, 2011) argues that cities amplify inequality by intensifying market returns to skill and capital. Urban areas become engines of innovation and productivity, but also sites of widening income

⁷ The administrative data sets of the University of Texas Inequality Project (2020), which specifically track inequalities of pay, provide a dense and consistent alternative that is also suited to finding Kuznets relationships in the data.

dispersion, especially where land and housing markets are exclusionary. In this light, inequality within the urban sector—between skilled professionals and informal or low-skilled workers—can be just as significant as rural-urban differentials.⁸ Further, Kolomak (2020) posits that urbanization's impact on inequality may be non-linear. While early urbanization typically raises inequality, at higher stages of institutional development and urban infrastructure intra-urban inequality may stabilize or even decline.

Yet, such turning points remain exceptional and context-specific. The edited volume by Kanbur and Venables (2005) too argues that agglomeration dynamics as well as institutional asymmetries may reinforce spatial inequalities between and within regions unless counterbalanced by deliberate policies.

In many low- and middle-income countries, urbanization is empirically associated with increasing income inequality. For example, Bourguignon and Morrisson (1998) show that a Kuznets-style dual-economy mechanism is at work: differences in overall inequality across developing countries are largely explained by the rural-urban income gap. In short, urban-rural divides (urbanization) are a key driver of income inequality in the developing world. Consistent with this, Oyvat (2016) demonstrates that unequal land ownership in rural areas leads to stagnant wages and heightened out-migration, contributing to growing inequality in cities. Here, rural-urban inequality is not a temporary feature of development but a structural reproduction of dualistic agrarian and urban systems. Migration itself is often driven by inequality, to echo Kuznets.

Ali et al. (2022) examine how urbanization influences income inequality across countries with varying income levels in the period 1990–2014. In lower-middle-income countries, urbanization is found to reduce income inequality. In upper-middle-income countries, urbanization has no significant impact at lower and middle quantiles but increases inequality at higher quantiles.

Empirical work in sub-Saharan Africa and Asia lends supports to this view. Adams and Klobodu (2018) find that urbanization is positively correlated with income inequality in sub-Saharan Africa, although institutions mitigate this relationship. Sulemana et al. (2019) conduct a panel data study (48 sub-Saharan African countries, 1996–2016), finding a positive association between urbanization and income inequality in sub-Saharan Africa. This suggests that recent rapid urbanization in Africa has tended to exacerbate inequality, consistent with the early-stage Kuznets prediction in a low-income context. Maket et al. (2023), in a dynamic panel analysis (22 sub-Saharan African countries, 2000–20), find evidence of a non-linear, inverted U-shaped relationship between urban agglomeration and inequality—i.e. inequality rises at initial stages of urbanization and falls later.

In Asia, Kanbur and Zhang's (2005) long-run case study of China demonstrates how structural transformations and policy phases (industrialization, market reforms) impact on regional and urban-rural inequality. They find that the urban-rural income gap has been a dominant component of China's inequality, illustrating the Kuznets process during rapid urbanization and development. Kanbur and

⁸ Research in Organisation for Economic Co-operation and Development (OECD) countries demonstrates that larger cities tend to concentrate economic opportunity but also exacerbate intra-urban disparities. Castells-Quintana et al. (2020) find that in OECD countries, larger cities systematically exhibit greater inequality. Similarly, Sarkar et al. (2018) show that income dispersion scales disproportionately with city size in Australia. These dynamics reflect not only differences between rural and urban earnings, but also growing dispersion within the urban wage structure—often linked to housing, education, and labour market segmentation.

Zhuang (2013), analysing spatial inequality across four populous countries in Asia (China, India, Indonesia, and the Philippines), argue that inequality between rural and urban areas persists even as intra-urban inequality rises, especially where rural-urban migration outpaces absorptive capacity in the formal urban sector. They decompose inequality into components (urban-rural gap, within-urban inequality, and within-rural inequality) and find that the impact of urbanization on inequality is context-specific—for example, urbanization narrows inequality overall in China but widens it in other countries—underscoring the nuanced role of urbanization in different contexts.

Finally, it is argued that global factors—for instance, commodity prices—mediate both between-sector and within-sector inequality. For example, Galbraith (2011) argues that rural incomes may rise during commodity booms, narrowing rural-urban gaps, but financial volatility may simultaneously widen wage inequality within urban economies through asset price inflation and labour market deregulation.

In sum, the scholarly literature since 1997 suggests that urbanization affects inequality through both compositional shifts between sectors and distributive dynamics within them—as Kuznets predicted.

3.2 Economic sectors and inequality

The second strand of literature on structural transformation and inequality is that on economic sectors and the reallocation of labour from agriculture to manufacturing and services. This body of research resonates with Kuznets (1955), given that ‘urban’ was associated with non-agriculture or at least interpreted thus. It also relates to the classical dual-economy models espoused by contemporaries of Kuznets, namely Lewis (1954) and Furtado (1964), in which economic sectors were defined not as agriculture/non-agriculture or rural/urban but as capitalist/modern and non-capitalist/traditional, and were characterized by productivity levels, labour surplus/absorption, orientation of production, and extent of ‘fructification’ by capital. In this dual-economy tradition, and consistent with Kuznets (1955), structural transformation or industrialization was expected to increase overall national income inequality over time. (Lewis too assumed rising individual inequality as a consequence of the capitalist’s capture of the surplus for reinvestment, at least until the Lewis turning point, although Furtado saw inequality as persistent or rising due to the relationship between sectors and elite capture of the capitalist sector’s surplus.)

Evidence shows that industrialization may affect countries differently, according to conditions and circumstances. For example, Ali et al. (2022) examine how industrialization influences income inequality across countries with varying income levels in the period 1990–2014. In lower-middle-income countries, they argue, industrialization has no significant effect, while in upper-middle-income countries industrialization raises inequality. Baymul and Sen (2019, 2020), using cross-country evidence (1960–2012), show that the movement of labour from agriculture to manufacturing tends to reduce income inequality, contradicting Kuznets’s original expectation, whereas shifts into services can raise inequality in early stages of development, and structural change in most low-income countries is dominated by this pathway, namely agriculture to services. Baymul and Sen (2019, 2020) revisit the Kuznets hypothesis using cross-country panel data (1960–2012). They show that structural transformation—specifically, the movement of labour from agriculture to manufacturing—is generally associated with a reduction in income inequality, contrary to Kuznets’s original expectation that early industrialization would increase inequality. In contrast, when labour shifts from agriculture to services, inequality tends to rise, particularly in the early stages of development. This is especially important because in many low-income countries, structural transformation in recent decades has been

characterized not by a shift into manufacturing, but by a direct movement from agriculture to low-productivity services. Relatedly, the issue of high levels of informality in the service sector has raised questions. Gindling and Newhouse (2014) argue that structural change without formalization risks entrenching inequality.

Movements related to tertiarization in advanced countries have garnered interest from scholars. Conceição and Galbraith (2001) proposed an augmented Kuznets curve to account for rising inequality in contexts where growth is driven by high-technology globalized sectors such as finance and information technology. They argue that in such economies, inequality may rise between sectors, due mainly to sector-specific monopoly rents and capital asset appreciation distributed to key parts of the workforce.⁹ This pattern extends the Kuznets hypothesis to the globalized world economy, showing that economic growth under certain technological and institutional conditions may sustain or increase inequality rather than reduce it over time. In short, technological change and capital concentration can create new inequality dynamics, and these dynamics are not necessarily resolved by structural transformation.

Further, discussion of early or ‘premature’ deindustrialization (see Palma 2006; Rodrik 2016) has further intensified such questions of structural change and inequality beyond the movements Kuznets (and others) foresaw. Alisjahbana et al. (2022) analyse the developer’s dilemma (if there is a trade-off between structural change and inclusive growth). Using evidence from nine developing countries, they identify five varieties of structural transformation, each with potentially different inequality dynamics. These are primary industrialization, upgrading, advanced industrialization, stalled industrialization, and secular deindustrialization, each characterized by patterns of rising or falling employment and value-added shares of manufacturing. Countries may shift between varieties over time, and inequality outcomes are not mechanical but depend on institutional factors, policy responses, and labour market dynamics. The authors find that growth-enhancing structural transformation does not automatically reduce inequality. Primary industrialization, in which there is an expansion of low-productivity manufacturing jobs without corresponding gains in value-added, may result in rising inequality. In contrast, with upgrading industrialization, where simultaneous growth in manufacturing employment and value-added contributes to productivity gains, there may be a decline in inequality; advanced industrialization, with increasing manufacturing value-added but declining employment, may be accompanied by rising income inequality, particularly between regions and skill groups. Finally, in secular deindustrialization, where both employment and value-added in manufacturing decline, there may be rising inequality.

Ibrahim et al. (2021) conduct an African regional analysis examining whether Africa faces the developer’s dilemma. They find that in many African countries, shifting labour from agriculture towards higher-productivity sectors has been accompanied by rising inequality, supporting the idea that without offsetting policies, structural economic change can initially exacerbate income gaps

Further, scholars have considered if global value chain (GVC) participation may have reinforced this sectoral dynamic between an ultra-modern sector that is integrated into GVCs and other sectors that are partially or not at all integrated into GVCs. GVC participation is empirically associated with higher national inequality due to the declining labour shares associated with GVC participation (Timmer et al. 2014). High-skilled workers in GVC-integrated firms enjoy higher earnings than their low-skilled

⁹ Galbraith (1998) analyses this phenomenon in detail for the United States.

counterparts in other sectors, even within the same industry or city. For example, Sbardella et al. (2017) find that countries with medium levels of economic complexity tend to experience the highest levels of wage inequality, which is in keeping with Kuznets's thinking that during early and middle stages of structural transformation, labour moves from homogeneous, low-wage sectors (e.g., agriculture) to heterogeneous urban sectors where wage differentials are larger—leading to a peak in inequality before it potentially declines.

As capital intensity rises and firms adopt more complex production systems, low-skilled jobs may be displaced or devalued, and unskilled labour relegated to the tertiary economy or low-productivity services, replicating a dual structure within and across sectors. Relatedly, recent studies (e.g., Seguino 2010; Tejani and Milberg 2016) highlight that structural transformation affects men and women differently, often reproducing or intensifying gender wage gaps, particularly in service-led and export-oriented industrialization pathways.

In sum, the scholarly literature since 1997 has argued that structural transformation affects inequality with urbanization, shifts between sectors, and distributive dynamics within them, in keeping with the Kuznets mechanism—although with results not necessarily consistent with Kuznets's core hypothesis.

The evidence since 1997, informed by new data, more disaggregated approaches, and an evolving global context, suggests that Kuznets's central intuition remains influential although incomplete. This review has examined two distinct yet overlapping lenses through which the contemporary literature understands the relationship between structural transformation and inequality: (i) urban-rural sectoral dynamics and (ii) economic sectoral dynamics. Each shows that inequality both between and within sectors aggregates inequality patterns in distinct but interconnected ways. It is important to note that despite improved data availability, substantial measurement issues remain, notably the capture of top incomes and cross-country comparability.¹⁰

4 Political economy and the evolution of inequality

While a preponderance of the Kuznets curve discourse has focused on economic processes and transformations, a significant literature has developed relating the evolution of income inequality to political processes and the political economy of development. As highlighted by Morgan and Souza (2025), Kuznets himself highlighted the essential role of social and political forces in the determinants of inequality as development proceeds. After setting up the basic economic process through which disproportionately higher savings among higher-income groups lead to further concentration of savings and thus assets and incomes, he asks why this process does not continue inexorably (Kuznets 1955: 8). This question has pervaded the literature and been posed again more recently, for example, by Acemoglu and Robinson (2002), Piketty (2014), Milanovic (2016), and Morgan and Souza (2025).

¹⁰ Galbraith et al. (2014, 2015) and Galbraith and Halbach (2016) provide detailed comparisons of coverage and data quality for a range of cross-national data sets.

Kuznets (1955: 12–18) gave us a possible mechanism to explain why inequality would not go on increasing, through the effects of a shift of population from a low-mean/low-inequality sector (agriculture) to a high-mean/high-inequality sector (industry/urban). But alongside this more narrowly economic mechanism, he also posited that rising inequality would be constrained by 'legislative interference and "political" decisions' (Kuznets 1955: 9). He brought into play the social tensions brought to the fore by rising inequality, set against 'the need for income inequalities as a source of savings for economic growth' (Kuznets 1955: 9). He did not develop this argument in detail, acknowledging that to 'discuss this complex of processes is beyond the competence of this paper' (Kuznets 1955: 9). However, the subsequent literature has taken up this line of enquiry.

Formal model-based analysis is conducted by Acemoglu and Robinson (2002), who further relate it to the evolution of political structures as income inequality increases. There are two classes in the model: the elite and the poor. In a standard setting there is saving and accumulation in the two classes, with a minimum investment requirement adding non-convexity to the model, and there is overall redistributive taxation determined by the political economy. However, a new feature is now added—the prospect of revolution. In the Acemoglu and Robinson (2002) model, if a revolution takes place, then the poor take over the stock of capital, but at the cost of a fraction of the capital stock being destroyed in the process. Kuznets (1955: 25) had already highlighted these features in his narrative:

The real per capita income level of many underdeveloped societies today is lower than the per capita income level of the presently developed societies before their initial phases of industrialization. And yet the stresses of the dislocations incident to early phases of industrialization in the developed countries were sufficiently acute to strain the political and social fabric of society, force major political reforms, and sometimes result in civil war.

The Acemoglu and Robinson (2002) narrative begins with the elites in charge and deciding taxation for their benefit. If revolution happens, then the elites lose out. To avert this they could extend the franchise and shift to a democratic regime where the median voter (the poor) decides the degree of redistribution. They show that in their model, different outcomes are possible, depending on model parameter configurations:

- *Autocratic disaster*: this is where although starting inequality is high and only the rich accumulate, revolution does not happen because the costs of organization are high and the loss of capital from revolution would be very high. So, the economy remains autocratic and at a low level of income. The authors offer the Philippines in the post-war period as a country case study illustrating this evolution.
- *East Asian miracle*: here the initial conditions are such that although there is autocracy, all agents accumulate, inequality declines, and revolution does not happen. The economy converges to a high level of income. As the name suggests, the authors argue that this case models the evolution of Taiwan and the Republic of Korea after the initial post-war land reforms.
- *Revolution*: here the rich start to accumulate, inequality increases, but the parameters are such that eventually revolution becomes a better option for the poor. 'This case is similar to pre-revolutionary Russia where social unrest increased, and attempts to bring more moderate groups, such as Mensheviks, to power were unsuccessful' (Acemoglu and Robinson 2002: 197).

- *The Kuznets curve*: here we start with autocracy, only the rich accumulate, inequality increases, but the parameters are such that the revolution constraint binds, and to avert revolution, the rich offer an extension of the franchise. The resulting democracy and median voter rule lead to progressive taxation and falling inequality. The authors argue that ‘this sequence of events corresponds to the experience of Britain, France, Sweden and Germany’ (Acemoglu and Robinson 2002: 196).

A key assumption in Acemoglu and Robinson (2002) is that the transition to democracy is irreversible. The experience of many countries clearly belies this sequence, where democratic governments have been overthrown and replaced by autocracy backed by the military. This has been particularly evident in Latin America, and the paper by Morgan and Souza (2025) conducts a detailed assessment of the evolution of inequality and political regime changes in Brazil to highlight what they call the Kuznets curse. Here the sequence envisaged is one where the country starts with democracy, but growth and accumulation, on standard assumptions, require inequality to increase, and with accumulation inequality will increase through the sectoral and structural transformation processes also elaborated by Kuznets (1955: 25), who thus posed the question: ‘Can the political framework of the underdeveloped societies withstand the strain which further widening of income inequality is likely to generate?’

Morgan and Souza (2025) compile a remarkable time-series of data on inequality and concomitant variables for the current period going back to the 1920s, to back up a narrative about the intricate two-way relationship between economic evolution and political regime changes. They relate their narrative to the developer’s dilemma framework of Alisjahbana et al. (2022), which brings to the fore inequality as a requirement for accumulation and then the initial consequence of growth with structural transformation. To this is added the evolution of political economy as a response, for example, ‘in the 1960s in Brazil, when social conflict endogenous to rapid structural change is resolved in authoritarian regimes that ensure the maintenance of, or the reversion to, the inequality-enhancing accumulation model’ (Morgan and Souza 2025: 21).

Thus, theoretical modelling, broad considerations of development in East Asia and Latin America, as well as detailed country-specific narratives all confirm an intricate relationship between inequality and development on one hand and the political economy of development on the other. Kuznets (1955) had already presaged the interacting forces of politics and economics, and his analysis can form the basis for a rich dialogue between economists and political scientists—another legacy of Kuznets at 70.

5 The Kuznets metaphor beyond national income inequality

The original Kuznets (1955) paper, and the initial vast literature that emanated from it, was focused on income inequality within countries and its evolution as per capita income in a country increased. But the ideas in the paper, and indeed the metaphor of a Kuznets curve relationship, have pervaded economics in general and development economics in particular. This section presents a selection of such extensions of the original Kuznets perspective.

5.1 Inequality of opportunity

The last two decades have seen the theoretical and empirical development of inequality of opportunity as a key complement to snapshot inequality in normative and even positive assessments of inequality. There are many dimensions to this extension and exploration, including how inequality is related to non-economic identity markers such as race or gender, and intergenerational transmission of inequality. With regard to the latter, Kuznets (1955: 2) had already alerted us to its importance:

Furthermore, if one may add a final touch to what is beginning to look like a statistical economist's pipe dream, we should be able to trace secular income levels not only through a single generation but at least through two—connecting the incomes of a given generation with those of its immediate descendants. We could then distinguish units that, throughout a given generation, remain within one ordinal group and whose children—through their generation—are also within that group, from units that remain within a group through their generation but whose children move up or down on the relative economic scale in their time.

On non-economic identity markers, the work of Roemer (1998) has been seminal in drawing economists' attention to factors beyond standard measures of vertical income inequality. Intuitively, inequality of opportunity is quantified by the fraction of total inequality that is accounted for by mean differences across key socio-economic groupings.

There is a vast literature on the measurement of different concepts of inequality of opportunity. In what is a first for the literature, Ferreira et al. (2025) extend the Kuznets curve metaphor to an opportunity Kuznets curve, in other words an inverted-U relationship between measures of inequality of opportunity and per capita GDP. To do this they deploy a remarkable data set, 'the Global Estimates of Opportunity and Mobility (GEOM) database, which contains 192 estimates of inequality of both income and opportunity for 72 countries' (Ferreira et al. 2025: 25). Using this database they show: (i) there is a standard Kuznets curve between per capita income and snapshot inequality; (ii) greater snapshot inequality is associated with lower income mobility as measured by intergenerational elasticity of earnings; (iii) there is an inverse U-shape relationship between measures of inequality of opportunity and per capita income, in other words an opportunity Kuznets curve. This empirical finding calls for theoretical investigation into mechanisms that might underlie it, and a start is also made in this direction by Ferreira et al. (2025).

5.2 Global inequality

The Kuznets perspective and mode of thinking could also be extended from the national to the global setting. Does the evolution of global inequality have Kuznets features and related explanations?

Global inequality has been a focus of interest in the era of rising within-country inequality. One counter to the claim that we are living in an age of rising inequality is that overall global inequality is in fact on the decline (Kanbur et al. 2024; Lakner and Milanovic 2016). An accounting for this decline can be conducted by decomposing world inequality into its between-country and within-country components. The within-country component has been rising, although even here the picture is nuanced (Kanbur 2019). However, the between-country component has been falling sharply because

of the relatively rapid growth of developing countries such as China relative to developed countries such as the United States, leading to the overall decline.

An understanding of the evolution of overall world inequality through its between- and within-country components is Kuznets-aligned in nature. Indeed, one can present a simplified discourse by dividing the world into two groups or 'sectors', developed (high-income, United States) and developing (low-income, China). While Kuznets placed his emphasis on the shift of population from one sector to the other (agriculture to industry), these shifts are not large across the developing countries/developed countries divide. Kuznets (1955: 8) also emphasized shifts in the relative per capita income of the two sectors, arguing that a widening gap in per capita income between agriculture and industry would contribute to rising inequality. But in the global context we have in fact seen the opposite happen across the two sectors of developed and developing countries, contributing to a decline in global inequality.

However, Kanbur et al. (2024) have further extended the Kuznets metaphor to consider three groupings: United States, China, and Africa. In this scenario, as China's per capita income increases rapidly, it approaches that of the United States but gets further away from that of Africa. While the first contributes to decreasing global inequality, the latter has the opposite effect. This is argued informally by Bourguignon (2015), Milanovic (2021), and Ravallion (2021) and shown formally for the mean log deviation by Kanbur et al. (2024). Further, Kanbur et al. (2024) show with projections that the implications of this particular Kuznets force are significant. It contributes, among other factors, to a remarkable reversal of the last three decades—global inequality is projected to start increasing before the end of the current decade.

5.3 Gender and environment

The U-shape or inverse U-shape metaphor of the Kuznets curve has been extended beyond income inequality to gender dimensions of development and to environmental degradation. On gender, the early study by Goldin (1995), itself building on the perspectives of Boserup (1970: 62), considers the evolution of female labour force participation as development proceeds and per capita income increases. It is argued that initially there is an 'income effect' whereby women's labour force participation is not needed as much to generate incomes. 'But as female education improves and as the value of women's time in the market increases still further [...] they move back into the labor force' (Goldin 1995: 62). This generates the U-shape, which Goldin (1995) confirms in her empirical analysis of a cross-section of countries.

This initial exercise has now been extended and updated in a large and growing literature on the gender Kuznets curve. Thus, to take just one example, Eastin and Prakash (2013) test for a gender Kuznets curve in a cross-section of countries not only with female labour force participation but also with female parliamentary participation and the general United Nations Gender Equality Measure, confirming the broadening of the Kuznets metaphor in this sphere.

The clearest case of the Kuznets curve as pure metaphor, relating only to an inverse-U relationship between two important variables of interest but not necessarily linked to inequality, is the environmental Kuznets curve. A comprehensive and up-to-date account of this perspective is given in Bettarelli et al. (2025).

The original use of the inverse-U metaphor for the relationship between environmental degradation and per capita income was by Grossman and Krueger (1995), who argued that CO₂ emissions first increased with development, peaked, and then declined. The label ‘environmental Kuznets curve’ was introduced by Panayotou (1993). There is now a vast literature on the topic with many surveys, including for example Guo and Shabaz (2024). However, Bettarelli et al. (2025) highlight several issues in identifying an environment Kuznets curve in the data: (i) a limited sample of countries; (ii) different measures of environmental degradation, necessarily related to climate change; (iii) the need to use a wide range of appropriate controls; (iv) the need to use mediating factors such as institutional quality and climate change policy (CCP); (v) distinguishing between market and non-market CCPs.

Bettarelli et al. (2025) address these concerns and arrive at a number of distinctive findings. They do find a turning point in the relationship between CO₂ emissions and per capita income at around US\$25,000, which is in line with earlier studies. Further, they find that ‘CCPs make the [environmental Kuznets curve] lower and flatter, thus favouring a decoupling between emissions and economic activity. Among CCPs, the impact is larger in the case of market-based CCPs, such as emissions trading systems and (particularly) carbon taxes’ (Bettarelli et al. 2025: 2).

6 Conclusion: new directions for policy and research

It is difficult to overstate the historical importance of Simon Kuznets as an economist—and as a policy practitioner. Among his major accomplishments were the creation of the National Income and Product Accounts, his contributions to the successful mobilization of the United States for global industrial warfare in the 1940s, and—of course—his presidential address to the American Economic Association in 1955, which has spawned, as we have seen, an enduring interest in the evolution of inequalities in the course of economic development. In this survey we have sketched the consequences of Kuznets’s suggestion for development economics research. The papers presented at the UNU-WIDER (2024) symposium aimed to push the frontier further still.

However, as our survey makes clear, the task set out by Kuznets continues to unfold, and the work is far from complete, especially as an evolving world economy continues to change the terms of reference for an analysis of economic inequality and structural change.

Notably, data remains inadequate even as it continues to evolve. Although the research community is now endowed with thousands of country-year observations of economic inequalities, developed according to multiple measuring strategies and covering a wide range of inequality concepts—gross income, net income, household income, personal income, consumption—the available measures through time and within countries remain problematic. Standards of quality in the available measures are uneven, coverage is often sparse, comparability across countries is questionable, and imputations to fill in gaps (both over time and between countries) are often strained. As a result, as we have seen, only a handful of national Kuznets curves can be extracted from even the most reputable mainstream data sources, and these leave open the question of the relationship between Kuznets’s hypothesis and the statistical relationships that bear his name. Economists working in this area, we believe, should devote more time and attention to improving and evaluating inequality data sets relative to the time spent on estimating econometric relationships from sparse and noisy data.

In the context of economic integration and globalization, the habit of framing inequality in terms of the national unit must also come under question. For example, Europe is today an economic union of 27 countries, and the eurozone a union of 20. Yet national measures of inequality overlook the differences in income level between countries, which has the effect of making Europe appear far more egalitarian than, at the continental level, it is—while also distorting the familiar comparisons between Europe and the United States. The changing relative position of national units within Europe is also missed, which may either reinforce or contradict the movements observed within countries over time. Conversely, in dealing with large continental entities such as the United States, China, India, or Brazil, there is a question of what level of regional aggregation is appropriate for an inequality measure.¹¹ Or should the United States, in a (nominal) free trade area with Mexico and Canada, be combined with those countries to obtain a unified North American inequality metric? Students of economic inequality, in short, should begin to free themselves, to the extent data permits, from the tyranny of national borders and national income accounts, a tyranny inherited from Kuznets but of which—in the current state of the world economy—he would not have approved.

Further still, with comprehensive (or nearly comprehensive) measures of inequality within countries and through time, it should become possible to ask whether there are common patterns in the movement of inequalities across countries, over time, and at the level of continents, geopolitical formations, and the world economy as a whole. Such common patterns can reveal whether the sources of changing inequality are primarily national—a matter of local labour markets, technology diffusion, and national policies, as the conventional literature tends to assume—or alternatively a matter of forces affecting the global economy as a whole, such as the sweep of interest rates, the ebb and flow of financial capital, debt crises, pandemics, wars, energy prices, and the imposition of austerity and privatization programmes by national elites, global finance, and international financial institutions. Ongoing work in this area strongly suggests that global macroeconomic forces do drive local inequality outcomes, just as common sense and practical experience lead many to believe. To confirm this in reliable data would be consistent with the spirit of Simon Kuznets, although a step beyond the specifics of the world view he advanced 70 years ago.

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¹¹ Galbraith and Choi (2020) show a strong relationship between measures of changing economic inequality at the state level in the United States and the outcomes of United States presidential elections since 1992, with states experiencing the largest increases in inequality voting almost uniformly for Democratic candidates.

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