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# Revisiting the Kuznets curve, 70 years on

Stella Keijzer<sup>1</sup> and Kunal Sen<sup>2</sup>

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**Abstract:** We revisit the iconic Kuznets (1955) paper, which postulated a clear positive relationship between inequality and economic development in the early stages of structural transformation. Using a newly released global dataset on income inequality—the WIID Companion—we set out the stylized facts of the Kuznets curve for a range of developing and developed countries. We examine the relationship between the net income Gini and per capita income, as well as the relationship between the net income Gini and structural transformation. Our main findings are that there is a clear inverted U-shaped relationship between the Gini and per capita income for the global sample, though the slope of the Kuznets curve differs substantially by income region. With respect to manufacturing-driven structural transformation, we see a clear negative relationship between the Gini and manufacturing employment share. However, when we broaden our concept of structural transformation to include financial and insurance services, we do see some evidence of the Kuznets curve. Further, national Kuznets curves produce mixed results—some follow the inverted U shape, and others do not. Overall, our findings suggest that while the Kuznets curve remains an important stylized fact, at least for some country contexts, inequality is not an inevitable consequence of economic development.

**Key words:** Kuznets, inequality, economic development, structural transformation, manufacturing, services

**JEL classification:** D31, O14, O30

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# 1 Introduction

What do we know about the relationship between inequality and economic development? Much of our understanding about how inequality and economic development co-evolve is provided by the work of Simon Kuznets and his now famous Kuznets curve. As Kuznets (1955) argued, as economies develop, inequality first increases and then decreases, giving rise to an inverted U-shaped relationship between inequality and economic development. The year 2025 marks the 70th anniversary of Kuznets' iconic 1955 article, and in this paper we take stock of what we know about the empirical regularities in the relationship between inequality and economic development.

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. This gap in the data on inequality has been addressed to a large extent by the release of a new global dataset on economic inequality—the WIID Companion (UNU-WIDER 2022a)—that is based on the World Income Inequality Database (see UNU-WIDER 2022b). The WIID Companion provides time-series data on inequality for many developing countries for a period sufficiently long to allow us to see how inequality evolves with economic development for a range of low- and middle-income countries, along with high-income countries.<sup>1</sup> The WIID Companion provides standardized measures of inequality that are comparable over time and across countries.<sup>2</sup> For the purpose of this paper, the WIID Companion offers a unique opportunity to revisit the Kuznets curve for a range of countries, with more up-to-date data on inequality.

While much of the empirical literature on the Kuznets curve has looked at the relationship between different measures of inequality and per capita income, the original Kuznets argument was about the relationship between inequality and structural transformation. In his argument, it was the movement of workers from low-productivity agriculture to high-productivity manufacturing and services that contributed to an increase in equality. Therefore, any examination of the Kuznets curve in a contemporary setting would be incomplete if we also did not look at the co-evolution of inequality and structural transformation, and not just income.

In this paper we set out the stylized facts of the Kuznets curve both within and across countries. We look at different measures of inequality—the income Gini, along with the Palma ratio and the income

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<sup>1</sup> 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 are available (Gradin, 2024).

<sup>2</sup> Gradin (2021) notes that half of the publicly available inequality measures needed to be adjusted as they are compiled from consumption or gross income data, or were not in per capita terms.

share of the top ten per cent of the income distribution. Our measures of economic development and structural transformation are the (log) per capita income and the share of manufacturing in total employment as the measure of structural transformation (we also look at the share of manufacturing and finance, insurance, and real estate (FIRE) as an alternate measure of structural transformation, since the FIRE sectors are high-productivity as well).

Our paper does not make causal claims—we are agnostic on whether economic development / structural transformation caused inequality or whether it is the other way around. We also recognize that there are many other factors such as taxation, government transfer policies, and global macroeconomic forces that contribute to inequality and not just the level of economic development—see Galbraith et al. (2025) for a thorough discussion of these factors.

The rest of the paper is as follows. Section 2 provides a brief overview of the theoretical foundations of the Kuznets curve and the empirical literature. Section 3 presents the data. Section 4 sets out the stylized facts of the Kuznets curve at the global and regional levels for the key variables of our study—net income Gini for inequality and log per capita income and share of manufacturing in total employment as measures of economic development and structural transformation. Section 5 presents the stylized facts with alternate measures of inequality and structural transformation, and an alternate database for structural transformation. Section 6 presents national Kuznets curves. Section 7 investigates the inequality–economic development relationship more rigorously using panel regressions. Section 8 concludes.

## **2 The Kuznets curve: Theoretical perspectives and empirical literature**

In this section we briefly discuss the theoretical foundations of the Kuznets process. The simple intuition of the Kuznets curve is as follows: in the early process of structural transformation, inequality increases as workers move from a sector with low average incomes and lower within-sector inequality—agriculture—to sectors with higher average income and higher within-sector inequality, such as manufacturing and services. At higher stages of structural transformation, as incomes increase, countries are more likely to enact redistributive policies. Subsequently, with more workers in the high-productivity manufacturing and services sectors, there is a decrease in inequality.

The core of Kuznets' argument on the relationship between inequality and development is captured in the following paragraph extracted from his 1955 paper:

An invariable accompaniment of growth in developed countries is the shift away from agriculture, a process usually referred to as industrialization and urbanization. The income distribution of total population in the simplest model, may therefore be viewed as a combination of the total income distributions of the rural and urban populations. What little we know of the structure of the two component income distributions reveals that a) the average per capita income of the rural population is usually lower than that of the urban; b) inequality in the percentage shares within the distribution for the rural population is somewhat narrower than that in the urban population ... Operating with this simple model, what conclusions do we reach? First, all other conditions being equal, the increasing weight of the urban population means an increasing share for the more unequal of the two component distributions. Second, the relative difference in per capita income between the rural and urban populations does not necessarily shift downward in the process of economic growth; indeed, there is some evidence to suggest that it is stable at best, and tends to widen because per capita productivity in urban pursuits increases more rapidly than in agriculture. If this is so, inequality in total income distribution should increase. (Kuznets 1955: 7–8)

As Sen (2023) argues, the Kuznets process of widening inequality with structural transformation (that is, movement of workers away from agriculture) can be described as composed of two sub-processes: (i) between-sector inequality: a movement of the population from a sector characterized **by lower mean income** to a sector characterized by **higher mean income**; and (ii) within-sector inequality: the movement of the population from a sector with **low within-sector inequality** to a sector with **higher within-sector inequality**. If both sub-processes work in the same direction (that is, if the movement of workers is from a sector with both a low mean and low variance in incomes to a sector with a higher mean and high variance in incomes), then structural transformation will unambiguously increase inequality. However, if the movement of workers is from a sector with low mean income but higher variance of income to a sector with a higher mean income but lower variance in income, then it is less obvious that inequality will necessarily increase.

A large empirical literature examines whether the inverted U-shaped relationship between inequality and per capita income is an empirical regularity (see Galbraith et al. 2025). The earlier literature estimated cross-country regressions of inequality and per capita income (Ahluwalia 1976). More recent studies look at the Kuznets curve within country—that is, they examine national Kuznets curves. Examples of such studies are Ravallion and Chen (2021) and Zhang (2021) for China, and Alvaredo et al. (2023) for several Central and Latin American countries. For China, Zhang 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’ (2021: 1192). This suggests that the Kuznets hypothesis seems to apply to China in the past four decades. Another study in the same vein is Ravallion and Chen (2021), who use a different measure of inequality—mean log deviation—and find that the Kuznets hypothesis holds since the 1990s.

There is considerable research on the Kuznets curve for Latin America. For example, 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 of the inverted U shape, with inequality rising in most countries until the 1990s and then falling during the early twenty-first century.

It is interesting to note that most studies of the Kuznets curve examine the relationship between measures of inequality and (log) GDP per capita. This is an important weakness as the original Kuznets postulate was about the relationship between structural transformation and inequality. We examine both the relationship between per capita income and inequality, and the relationship between structural transformation and inequality in this paper.

### **3 Data**

As already noted, the primary data source is the UNU-WIDER World Income Inequality Database (UNU-WIDER 2022a, 2022b), which is the most comprehensive database of high-quality survey-based measures of income inequality for most countries and historical entities. The WIID Companion version, used in this study, standardizes inequality data from public sources across developed and developing countries by converting all measures to a common welfare concept: net income per capita. This ensures cross-country and temporal comparability.

However, it is important to note that the WIID Companion employs techniques of interpolation and extrapolation to generate continuous time series for inequality measurements. For advanced economies these techniques may be applied only occasionally. In developing countries data gaps tend to be larger, and thus results should be examined with more caution. In addition, as net income includes rental and profit incomes, which are excluded in the original Kuznets hypothesis, full alignment with the theory remains limited (Galbraith et al. 2025). The WIID Companion provides harmonized annual data for the Gini coefficient, the Palma ratio, the income share of the top ten per cent—our preferred measures of inequality—as well as metadata such as income per capita (GDP per capita in 2017 US dollar purchasing power parity prices), countries' geographic region and income group based on the World Bank data. GDP per capita values are transformed using the natural logarithm.

The data on structural transformation come from the Groningen Growth and Development Centre (GGDC) database (Timmer et al. 2015). The GGDC database provides annual series of persons employed (in thousands) for ten broad sectors of the economy. For the main analysis, we calculate the share of manufacturing sector employment in total employment.

The analysis is conducted using an unbalanced panel to maximize data coverage. The historical data spans the period from 1950 to 2012, with continuous observations available for all countries from 1975 to 2010. The dataset includes 2,266 country–year observations across 41 countries. A detailed list of the countries, along with their classification by geographical region and income group, is provided in Appendix A, Tables A1 and A2.

To extend the analysis with broader coverage of Africa and Asia, an alternative dataset is constructed by merging the WIID Companion with the Economic Transformation Database (ETD; Kruse et al. 2022). Similar to the GGDC, the ETD offers comprehensive, long-term, and internationally comparable data on structural composition. Consistent with the main analysis, we calculate the share of manufacturing employment in total employment. The panel is balanced and includes 1,479 country–year observations for 51 countries from 1990 to 2018. An important difference between GGDC and ETD is the inclusion of more low-income Africa (18 countries in ETD versus 11 in GGDC) and South Asia (five countries in ETD versus one in GGDC) in ETD, albeit at the cost of a shorter time span. A detailed list of countries in the alternative dataset is provided in Appendix A, Tables A3 and A4.

## 4 Stylized facts of the Kuznets curve

In the main analysis we consider two versions of the Kuznets curve: (i) the relationship between GDP per capita (in logarithmic form) and inequality, and (ii) the relationship between the share of manufacturing employment in total employment and inequality. We first examine the overall patterns across a pooled sample of countries, then disaggregate the results by income group and geographical region. Inequality in this analysis is measured using the Gini coefficient. National-level Kuznets curves and alternative measures of inequality and structural transformation are discussed in Sections 6 and 5, respectively.

In the full sample, both relationships indicate a general decline in inequality as development progresses. However, the link between GDP per capita and inequality displays a clear inverted U shape, with inequality falling as GDP per capita increases (Figure 1). By contrast, the relationship between manufacturing-driven structural transformation and inequality shows a consistently negative association throughout the observed range (Figure 2).

When disaggregated by income group, all four groups display a generally concave pattern in the relationship between GDP per capita and inequality, though the slope of the curve differs substantially (Figure 3). High-income countries show a mostly flat or slightly declining trend. Upper-middle-income countries exhibit a more pronounced inverted U shape, with inequality initially rising as GDP per capita increases. Lower-middle-income countries display the strongest inverted U pattern, with

inequality decreasing as GDP per capita grows. In the low-income group, inequality rises slightly with GDP per capita, though the sample is limited to only two countries (Ethiopia and Malawi).

The relationship between manufacturing employment share and inequality is more homogeneous (Figure 4). In high-income countries, the fitted curve is relatively flat. In both upper-middle- and lower-middle-income countries, inequality declines as the share of manufacturing employment increases. Among low-income countries, inequality decreases sharply with rising manufacturing employment in the available sample.

Regional patterns in the GDP per capita–inequality relationship are less curved than in the pooled sample (Figure 5). Latin America and the Caribbean, Europe and Central Asia, and the Middle East and North Africa show declining inequality with rising GDP per capita. Data for East Asia and the Pacific form an overall flat pattern, while Sub-Saharan Africa shows an upward trend. North America and South Asia display an increasing convex relationship, but these patterns are based on only one country in each case (the United States and India, respectively).

The relationship between manufacturing-driven structural transformation and inequality varies considerably across regions (Figure 6). Latin America and the Caribbean region show a concave, downward trend in the Gini coefficient. North America and East Asia and the Pacific exhibit flatter, declining relationships. The pattern in Sub-Saharan Africa suggests an overall decline as well, although the scatter points indicate a more complex and less easily interpretable relationship. In Europe and Central Asia, the link between manufacturing employment share and inequality is largely flat. In the Middle East and North Africa, a U-shaped curve is observed, though data is limited to Egypt and Morocco. Finally, South Asia (India) displays a sharp increase in inequality as the manufacturing employment share rises.

## **5 Alternate measures of inequality and structural transformation**

In this section we review the stylized facts of the Kuznets curve using alternate measures of inequality and structural transformation.

We first consider alternative measures of income inequality: the Palma ratio and the income share of the top ten per cent. The relationship between the Palma ratio and GDP per capita is largely flat among high-income countries (Figure 7), while other income groups display concave patterns. Lower-middle-income countries show a pronounced decline in inequality as GDP per capita increases,

whereas upper-middle- and low-income groups exhibit rising inequality. Results using the income share of the top ten per cent follow similar patterns (Figure 8).

The relationship between manufacturing employment share and the Palma ratio is more uniform across income groups (Figure 9), with all groups showing a downward trend. Inequality in high-income countries appears less responsive to changes in manufacturing employment share, producing a relatively flat curve. In contrast, upper-middle-, lower-middle-, and low-income countries experience substantial decreases in inequality as manufacturing employment grows. Using the top ten per cent income share as the inequality measure confirms these findings, while high-income countries show a slightly convex relationship (Figure 10). These results are consistent with the findings of the previous section.

Next, we examine the relationship between income inequality, measured by the Gini coefficient, and the share of employment in the manufacturing and FIRE sectors combined (Figure 11). As noted by Sen (2023), the FIRE sectors have among the highest levels of productivity across all sectors and the movement of workers from agriculture to FIRE services may imply a different relationship between inequality and structural transformation than one where the movement of workers is to the manufacturing sector (see also Baymul and Sen 2020). The overall trend resembles that observed for manufacturing-driven structural transformation (Figures 4, 8, and 10), though the curvature is more pronounced. High-income countries exhibit a convex, predominantly declining relationship. Upper-middle-income countries display a flatter but distinct inverted U shape, while lower-middle- and low-income countries show steep, concave declines in inequality as employment in these sectors increases.

Lastly, we broaden the measure of structural transformation to include employment across all non-agricultural sectors: finance, insurance, real estate, and business services; government services; community, social, and personal services; construction; manufacturing; mining; trade, restaurants, and hotels; transport, storage, and communication; and utilities (Figure 12). In high- and low-income countries, the Gini coefficient appears unaffected by changes in non-agricultural employment, although scatter points suggest a possible downward trend. Upper-middle-income countries display a flatter inverted U shape, with inequality mostly increasing as non-agricultural employment grows. In lower-middle-income countries, the pattern shows a clear decline in inequality with higher shares of non-agricultural employment.<sup>3</sup>

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<sup>3</sup> In Appendix A we present the descriptives using the ETD data instead of the GGDC data. Note that ETD does not have many high-income countries but has substantially more low-income countries as compared with GGDC.

## 6 National Kuznets curves

We examine whether we see an inverted U-shaped relationship between the net income Gini and per capita income/manufacturing employment share for selected developed and developing countries.<sup>4</sup> The developing countries we consider are Brazil, Chile, China, Egypt, India, Indonesia, Republic of Korea (South Korea), Mexico, and South Africa. We also include the two countries studied by Kuznets (1955)—the United Kingdom and the United States—and a country known for its egalitarian policies, Sweden.

An inverted U shape and declining inequality are evident for Brazil, the Republic of Korea, and Mexico (Figure 13). Chile also suggests an inverted U shape but indicates an overall increase in inequality. Egypt's Gini coefficient follows a steep linear decline. In contrast, China, India, Indonesia, South Africa, Sweden, the United Kingdom, and the United States exhibit convex relationships, with the United Kingdom and the United States showing particularly sharp increases in inequality at higher levels of GDP per capita.

Country-specific trends based on manufacturing employment share are generally less curved and do not mirror the patterns observed above (Figure 14). Chile, the United Kingdom, the United States, and, to a lesser extent, Mexico show a distinct decline in inequality associated with manufacturing-driven structural transformation. India displays a clear increase in inequality with a higher share of manufacturing employment, while Sweden follows a convex pattern. Brazil, China, Egypt, Indonesia, the Republic of Korea, and South Africa show flatter fitted curves, with Gini coefficients varying widely across different levels of manufacturing employment.

Overall, the evidence for the National Kuznets curve remains mixed. Inequality may rise or fall with economic development initially, and may not necessarily fall at higher levels of per capita income (Galbraith et al. 2025). As noted by Roine and Waldenström, the evidence suggests 'that there is no mechanical relationship between inequality and industrialization or technological change. It is no more unavoidable that inequality increases at early stages of introducing new technology, than it is automatic that inequality eventually goes down' (2015: 552). Clearly, country contexts matter, and the

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Generally, the patterns we observed with GGDC are also evident using ETD. There is an inverted U shape relationship between inequality and per capita income (though not as concave as with GGDC) and a negative relationship between inequality and manufacturing employment share. These relationships are also evident in low-income countries, where ETD has more observations.

<sup>4</sup> Unlike other plots in our analysis, individual country Kuznets curves are constructed using country-specific scales to better capture the curvature and patterns in the relationships.

relationship between inequality and economic development is conditional on initial conditions, the race between technology and skill, and the redistributive policies followed by national governments.

## 7 Regression results

In this section we estimate the relationship between inequality and economic development/structural transformation using two-way fixed effects panel regressions. We include country fixed effects that control for unobserved time-invariant country-specific factors that may affect inequality, and include year fixed effects to control for global macroeconomic shocks that may affect inequality for all countries. To capture the inverted U-shaped nature of the Kuznets curve, we include both level of per capita income and its square (and similarly for the share of manufacturing in total employment). In all specifications, we first estimate the equations with no country and year fixed effects, then with year fixed effects, and finally with both year and country fixed effects.<sup>5</sup>

In Table 1 we present the results for the pooled sample. In Table 2, we estimate the equations by income group, with log GDP per capita and its square as the core explanatory variables. In Table 3, we maintain the split by income group, but use manufacturing employment share and its square as the core explanatory variables.

Table 1 for the pooled sample suggests an inverted U-shaped relationship between inequality and per capita income when we include no fixed effects or only year fixed effects, with the coefficient on GDP per capita (log) positive and significant and the coefficient on the square of GDP per capita negative and significant. However, the significance of the coefficients is not evident when we also include country fixed effects. For manufacturing employment share, we see a clear presence of a U-shaped curve across all specifications. The fact that inequality decreases initially with manufacturing employment share may be attributed to the fact that the initial increase in manufacturing employment in many countries is due to the expansion of labour-intensive manufacturing exports, which tend to be inequality decreasing (Baymul and Sen 2020).

Table 2 shows that the presence of the Kuznets curve is evident in high- and lower-middle-income countries but not for upper-middle- and low-income countries. Table 3 shows that the U-shaped relationship between inequality and manufacturing-driven structural transformation is evident for all regional groups except upper-middle-income countries (where the coefficient on manufacturing employment share is negative but not significant). Generally, the results from the panel regressions

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<sup>5</sup> The results are presented with standard errors not clustered at country level—for the low-income region, with only two countries, we are not able to obtain results with clustered standard errors.

show the presence of the Kuznets curve only for some country groups, and a very different relationship between inequality and structural transformation than that postulated by Kuznets.

It is important to reiterate that the regression results that we have presented in this section do not allow us to make causal claims about the effect of economic development/structural transformation on inequality, as the estimates presented in Tables 1–3 suffer from reverse causality and omitted variable bias. However, the results do seem to confirm what we have observed in the scatter plots, even when we take into account country- and year-specific factors.

## 8 Conclusions

In this paper we revisit the iconic Kuznets (1955) paper which postulated a clear positive relationship between inequality and economic development in the early stages of structural transformation. Using a newly released global dataset on income inequality—the WIID Companion—we set out the stylized facts of the Kuznets curve for a range of developing and developed countries. The WIID Companion standardizes inequality data from public sources across developed and developing countries by converting all measures to a common welfare concept, net income per capita, thus ensuring cross-country and temporal comparability.

We examine the relationship between the net income Gini and per capita income as well as the relationship between the net income Gini and structural transformation. Our main findings are that there is a clear inverted U-shaped relationship between the Gini and per capita income for the global sample, though the slope of the Kuznets curve differs substantially by income region. With respect to manufacturing-driven structural transformation, we see a clear negative relationship between the Gini and manufacturing employment share, which contradicts the Kuznets postulate that structural transformation leads to higher inequality. Examining other measures of inequality—the Palma ratio and the income share of the top decile—we obtain similar findings as with the Gini. However, when we broaden our concept of structural transformation to include financial and insurance services, we do see some evidence of the Kuznets curve. This suggests that services-driven structural transformation may have a different effect on inequality than manufacturing-driven structural transformation. Further, national Kuznets curves produce mixed results—some follow the inverted U shape, and others do not.

When we use a different dataset for structural transformation, ETD, which includes significantly more low-income countries than GGDC, we find that the patterns we observed with GGDC are also evident using ETD. There is an inverted U-shaped relationship between inequality and per capita income (and a negative relationship between inequality and manufacturing employment share). This suggests that our main findings are not sensitive to the countries included in the analysis or the time period. The

Kuznets process does seem to hold for low-income countries as much as it does for middle- and high-income countries.

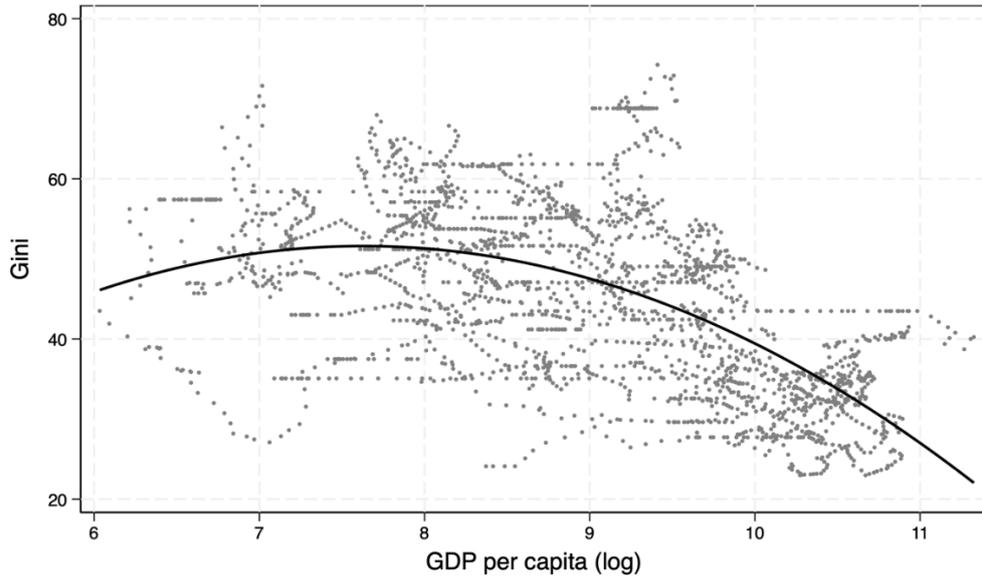
We also estimate two-way fixed effects panel regressions to check for the concavity of the relationship between the Gini and per capita income. We find some evidence of the concave relationship for some income groups. For manufacturing employment share, the relationship seems to be the opposite—there is a U-shaped relationship between manufacturing-driven structural transformation and inequality. Our regression results also confirm the patterns that were evident in the descriptives. Overall, our findings suggest that while the Kuznets curve still remains an important stylized fact, at least for some country contexts, inequality is not an inevitable consequence of economic development.

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# Figures and tables

Figure 1: The relationship between GDP per capita and inequality (all countries)



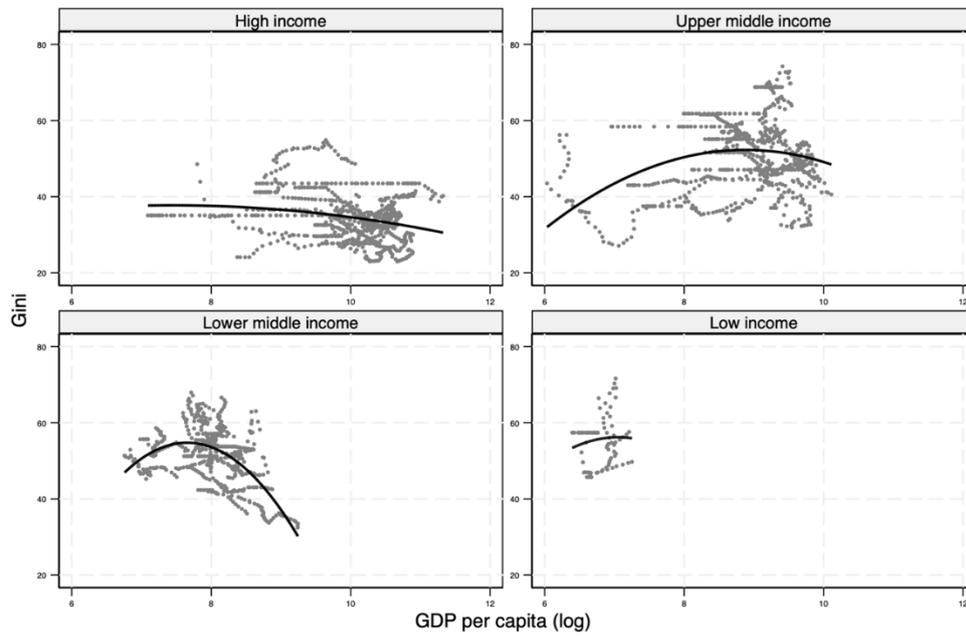
Source: WIID and GGDC, our calculations.

Figure 2: The relationship between manufacturing employment share and inequality (all countries)



Source: WIID and GGDC, our calculations.

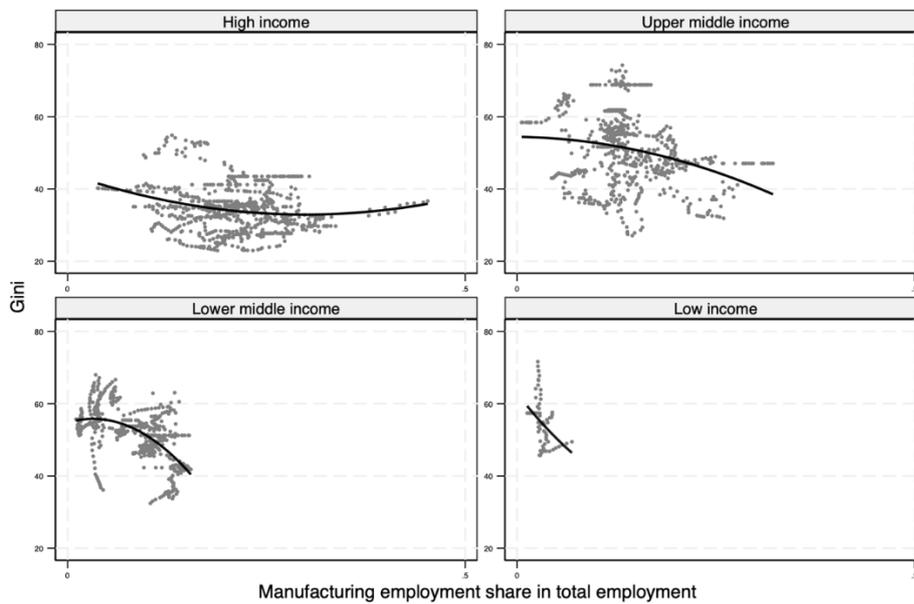
**Figure 3: The relationship between GDP per capita and inequality (by income level)**



Note: The low-income group is limited to Ethiopia and Malawi.

Source: WIID and GGDC, our calculations.

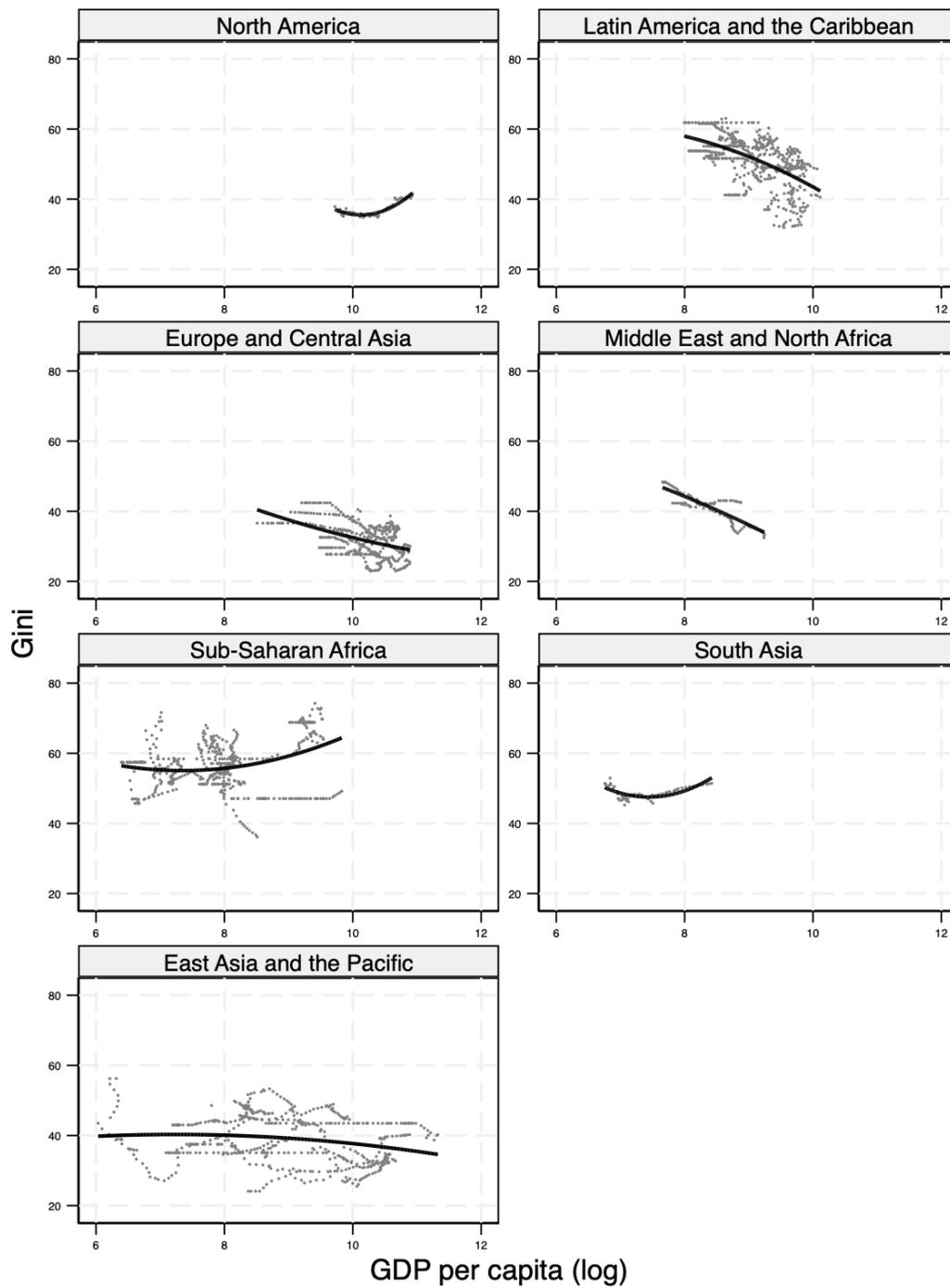
**Figure 4: The relationship between manufacturing employment share and inequality (by income level)**



Note: The low-income group is limited to Ethiopia and Malawi.

Source: WIID and GGDC, our calculations.

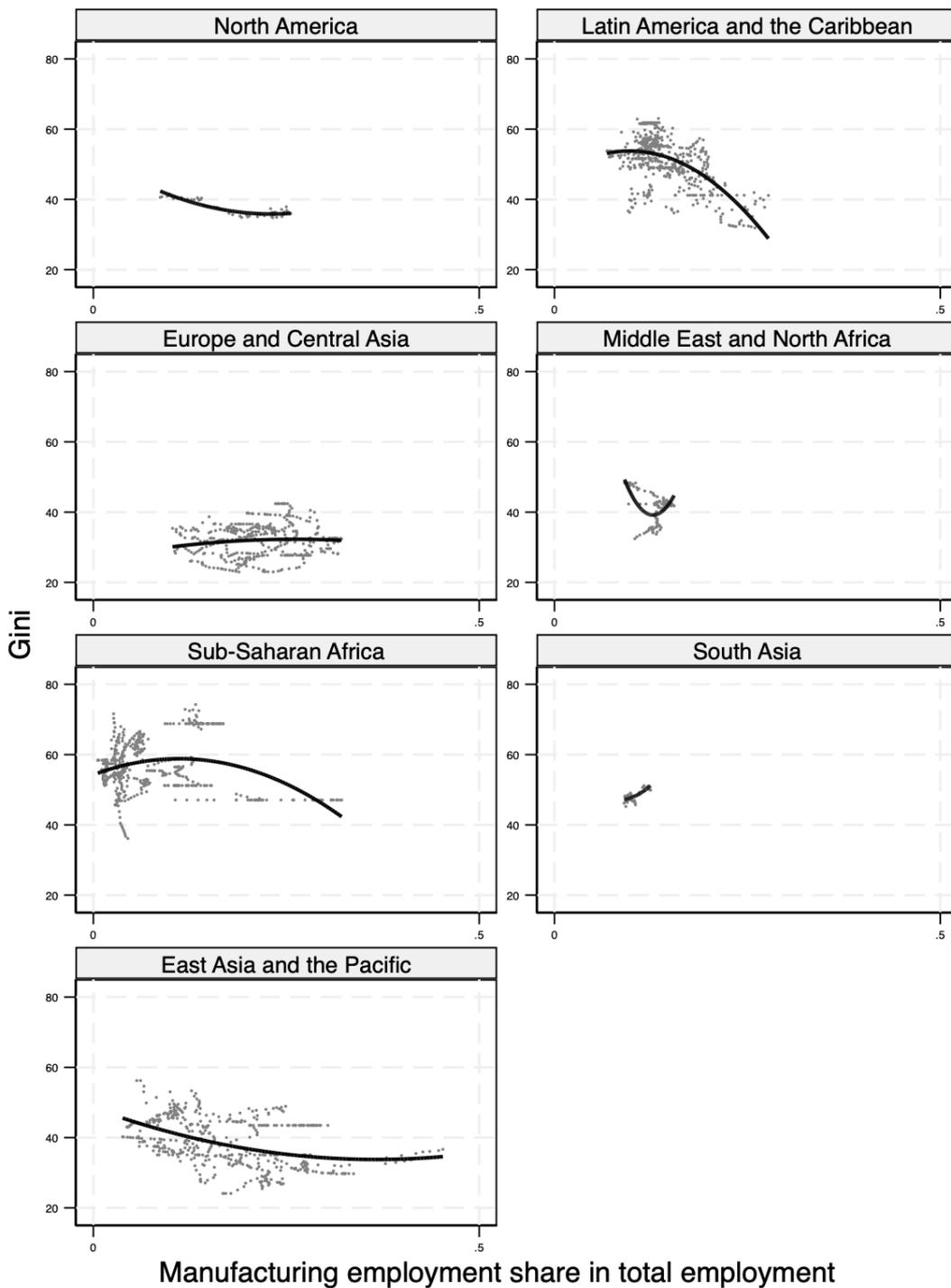
**Figure 5: The relationship between GDP per capita and inequality (by region)**



Note: The close curve fit reflects the limited representation in select regions: only one country each from North America (United States) and South Asia (India), and two from the Middle East and North Africa (Egypt and Morocco).

Source: WIID and GGDC, our calculations.

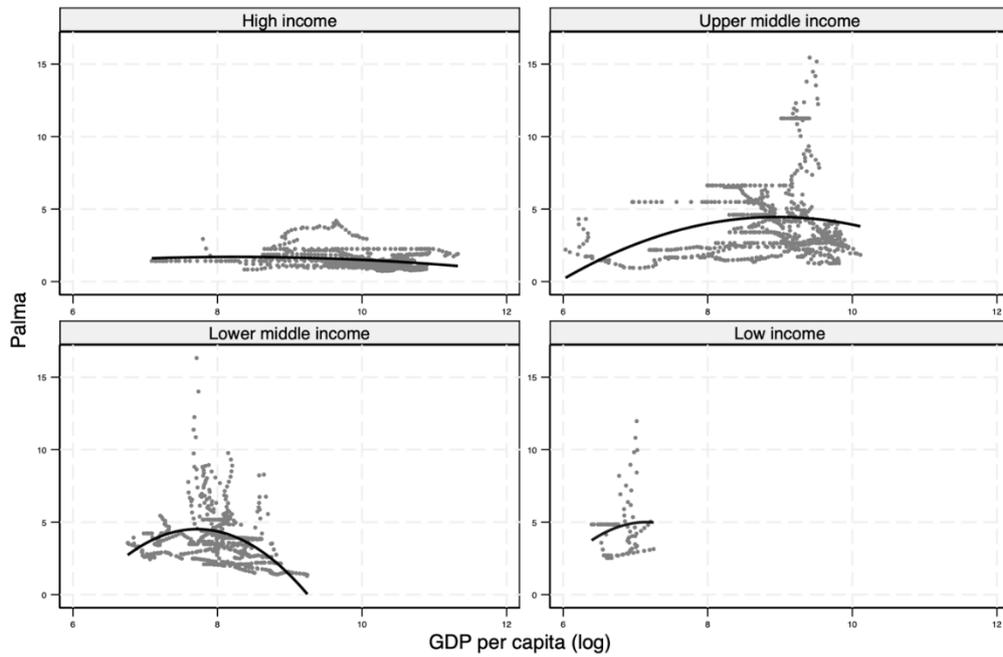
**Figure 6: The relationship between manufacturing employment share and inequality (by region)**



Note: The close curve fit reflects the limited representation in select regions: only one country each from North America (United States) and South Asia (India), and two from the Middle East and North Africa (Egypt and Morocco).

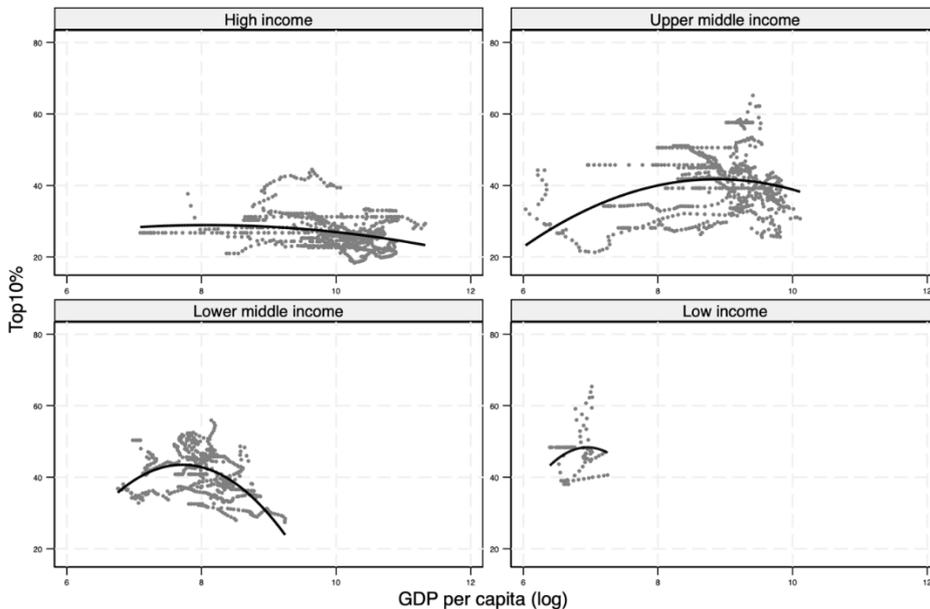
Source: WIID and GGDC, our calculations.

**Figure 7: The relationship between GDP per capita and Palma ratio (by income level)**



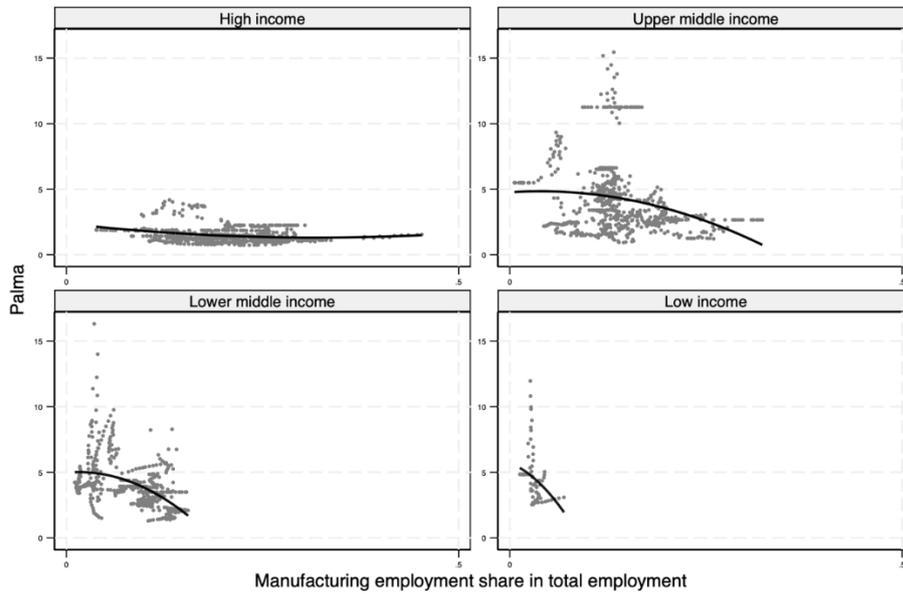
Note: The low-income group is limited to Ethiopia and Malawi in the sample.  
 Source: WIID and GGDC, our calculations.

**Figure 8: The relationship between GDP per capita and income share of the top decile (by income level)**



Note: Top10%: the income share of the top ten per cent of country population. The low-income group is limited to Ethiopia and Malawi in the sample.  
 Source: WIID and GGDC, our calculations.

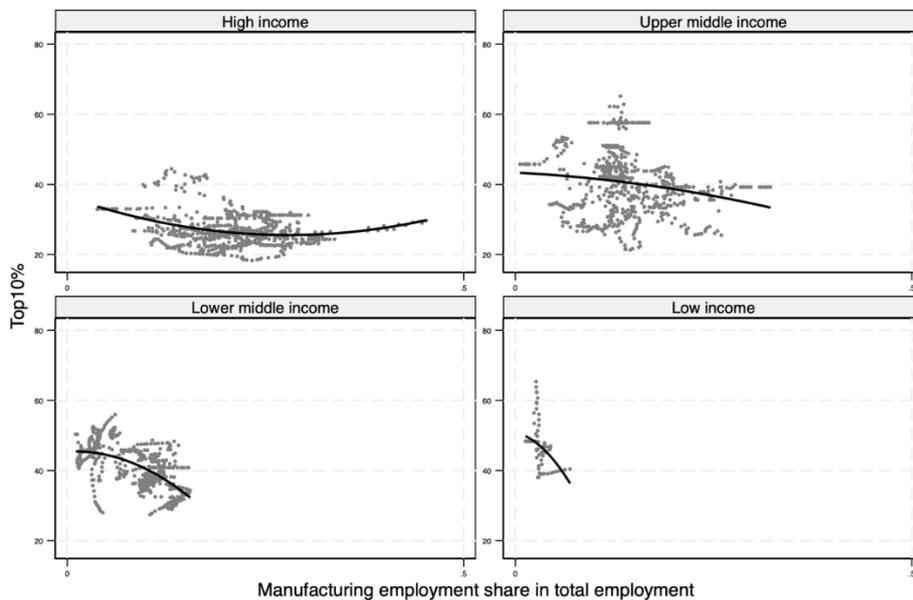
**Figure 9: The relationship between manufacturing employment share and Palma ratio (by income level)**



Note: The low-income group is limited to Ethiopia and Malawi in the sample.

Source: WIID and GGDC, our calculations

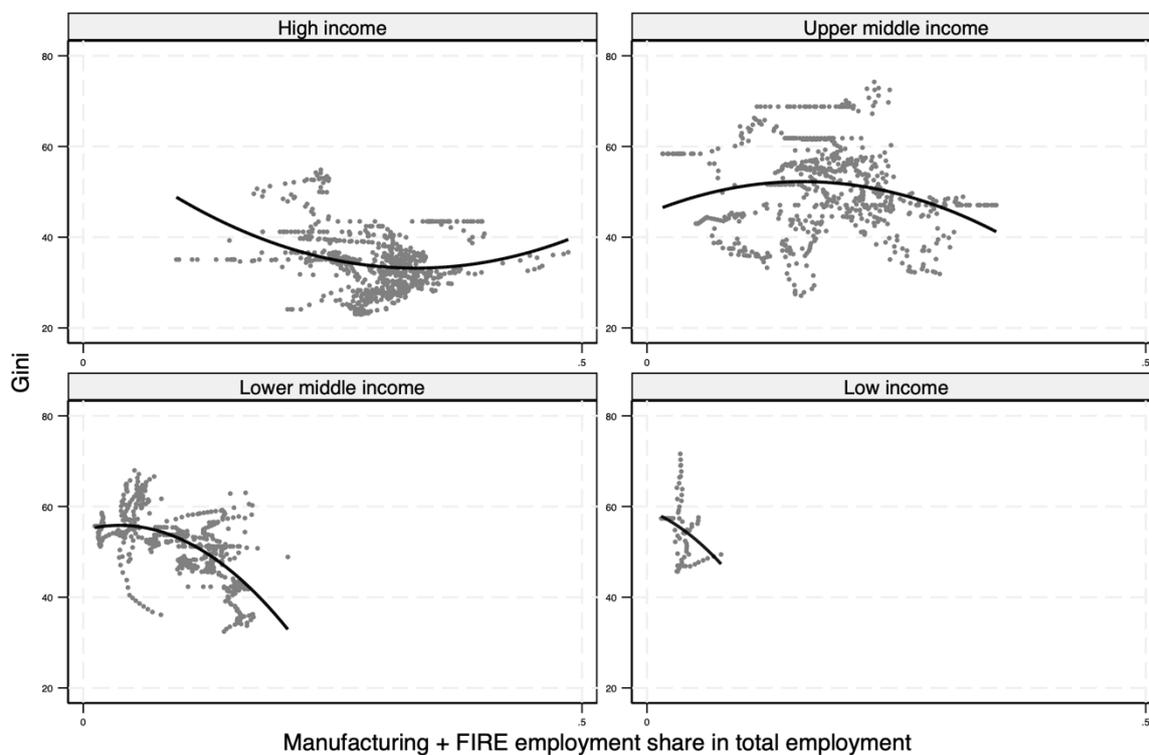
**Figure 10: The relationship between manufacturing employment share and income share of the top decile (by income level)**



Note: Top10%: the income share of the top ten per cent of country population. The low-income group is limited to Ethiopia and Malawi in the sample.

Source: WIID and GGDC, our calculations.

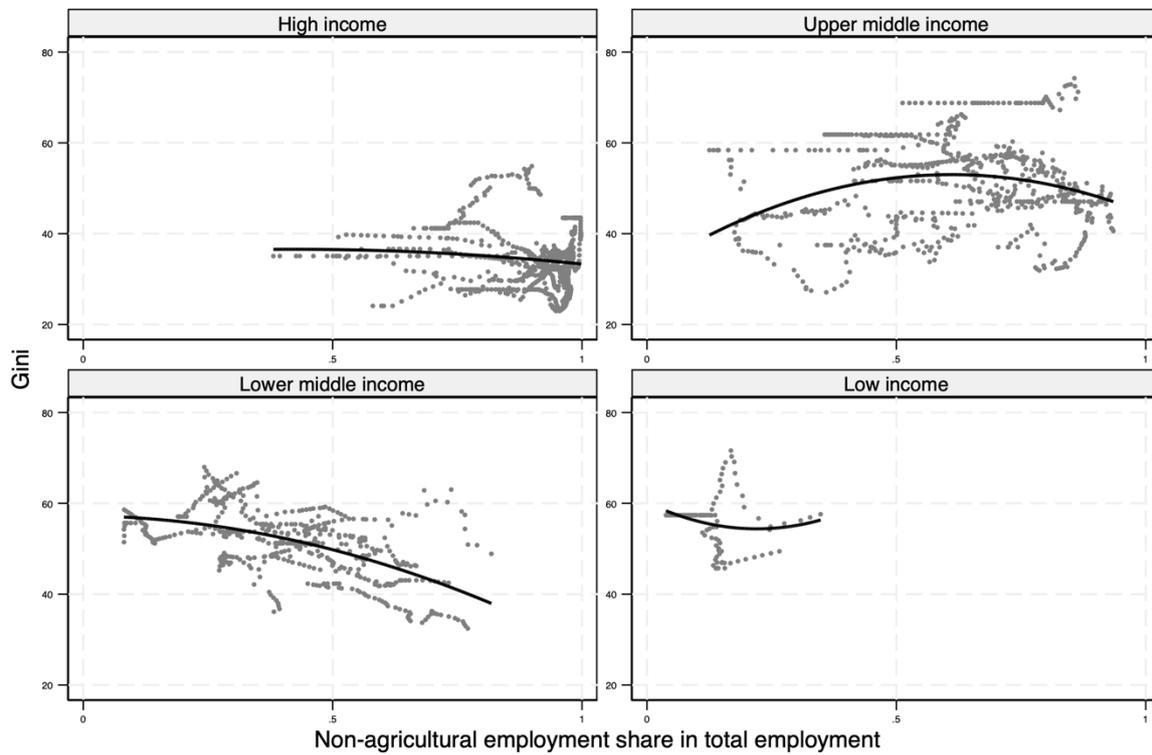
**Figure 11: The relationship between manufacturing + FIRE employment share and inequality (by income level)**



Note: Manufacturing + FIRE employment share in total employment: the share of persons employed in manufacturing, finance, insurance, and real estate sectors in total employment. The low-income group is limited to Ethiopia and Malawi in the sample.

Source: WIID and GGDC data, our calculations.

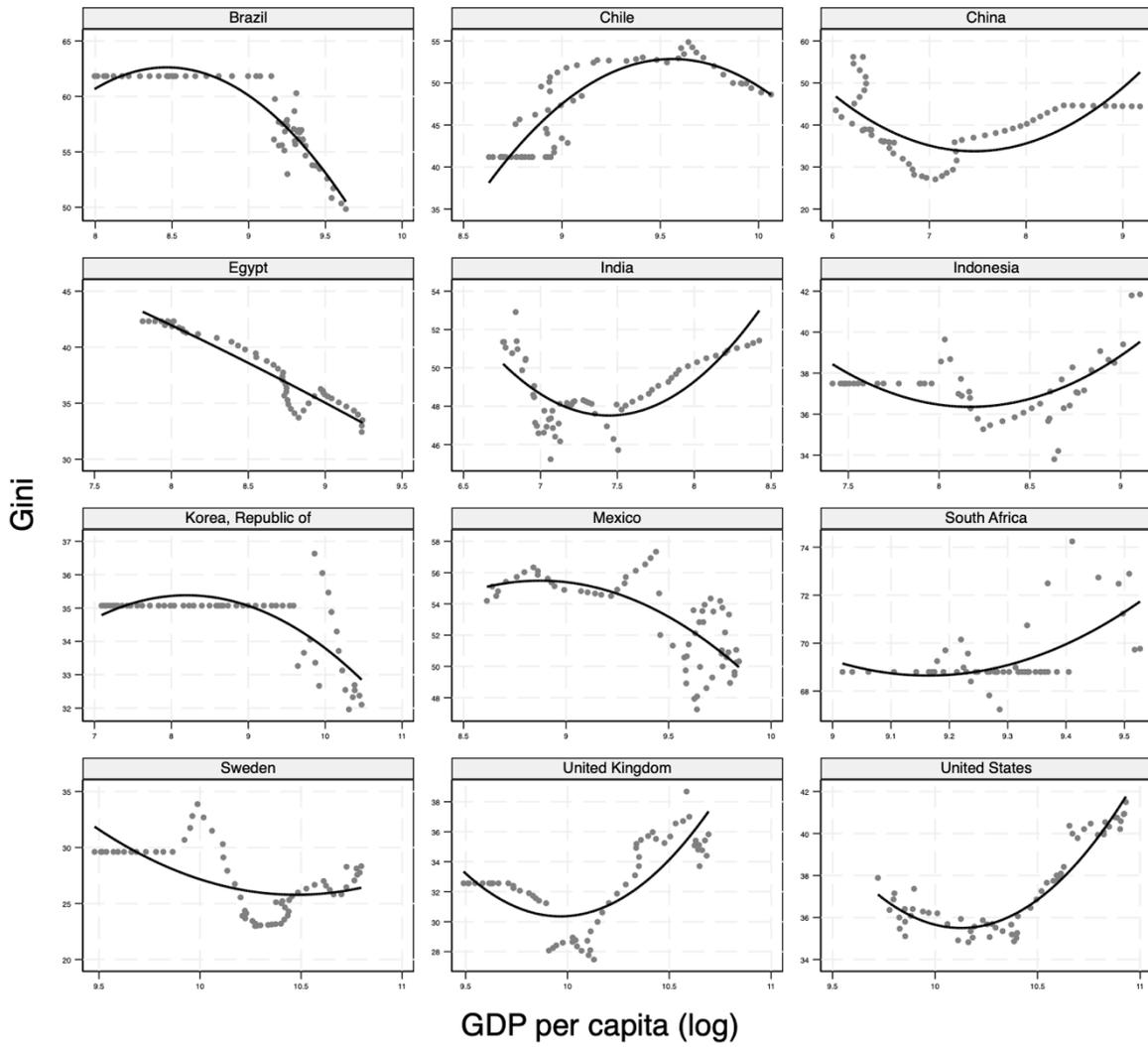
**Figure 12: The relationship between non-agricultural employment share and inequality (by income level)**



Note: Non-agricultural employment share in total employment: the share of persons employed in finance, insurance, real estate, and business services; government services; community, social, and personal services; construction; manufacturing; mining; trade, restaurants, and hotels; transport, storage, and communication; and utilities sectors in total employment. The low-income group is limited to Ethiopia and Malawi in the sample.

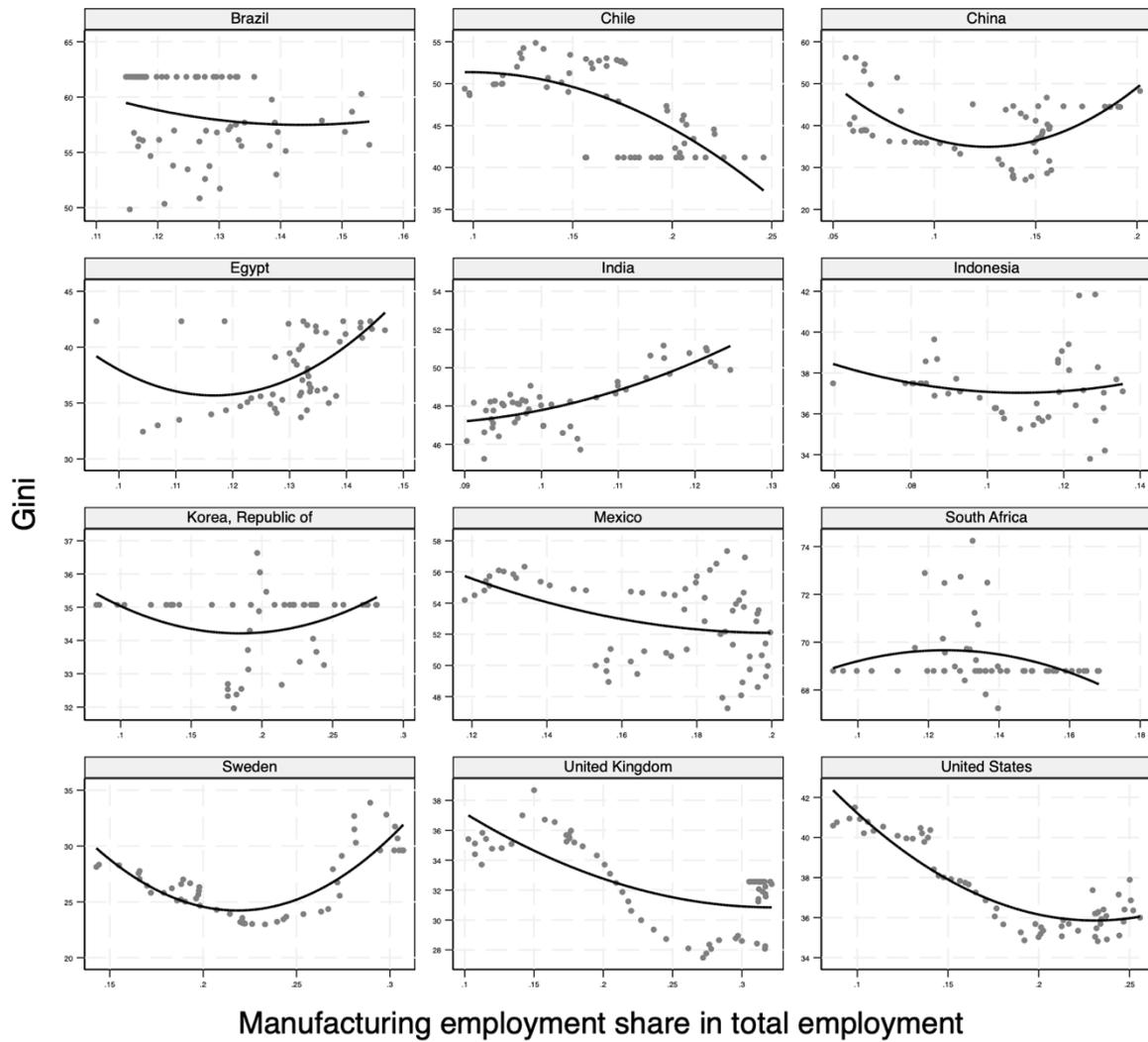
Source: WIID and GGDC data, our calculations.

Figure 13: The relationship between GDP per capita and inequality (selected countries)



Source: WIID and GGDC data, our calculations.

**Figure 14: The relationship between manufacturing employment share and inequality (selected countries)**



Source: WIID and GGDC data, our calculations.

**Table 1: Regression results. All countries**

	(1)	(2)	(3)	(4)	(5)	(6)
	No FE	Year FE	Year&Cy FE	No FE	Year FE	Year&Cy FE
GDP per capita (log)	33.00*** (2.383)	37.24*** (2.356)	-0.169 (1.439)			
GDP per capita (log) <sup>2</sup>	-2.163*** (0.135)	-2.438*** (0.134)	0.0209 (0.0810)			
Manufacturing emp. share				-122.8*** (8.077)	-121.0*** (8.219)	-30.52*** (6.831)
Manufacturing emp. share <sup>2</sup>				103.2*** (23.87)	90.02*** (24.44)	37.93** (16.76)
Constant	-74.24*** (10.40)	-92.75*** (10.58)	40.75*** (6.620)	60.27*** (0.622)	62.78*** (2.447)	45.49*** (1.164)
Observations	2,266	2,266	2,266	2,169	2,169	2,169
R-squared	0.346	0.393	0.918	0.386	0.399	0.922
Country FE	NO	NO	YES	NO	NO	YES
Year FE	NO	YES	YES	NO	YES	YES
Clustered SE	NO	NO	NO	NO	NO	NO

Notes: Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Source: WIID and GGDC data, our calculations.

**Table 2: Regression results, with log GDP per capita, by income group**

	High income			Upper middle income			Lower middle income			Low income		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	No FE	Year FE	Year&Cy FE	No FE	Year FE	Year&Cy FE	No FE	Year FE	Year&Cy FE	No FE	Year FE	Year&Cy FE
GDP per capita (log)	7.036 (4.862)	33.38*** (5.427)	18.37*** (2.977)	44.59*** (6.246)	42.18*** (6.680)	4.979 (3.164)	149.0*** (11.81)	164.6*** (13.00)	39.64*** (8.881)	91.35 (195.3)	98.41 (406.6)	-481.1 (326.5)
GDP per capita (log) <sup>2</sup>	-0.473* (0.256)	-2.008*** (0.293)	-1.140*** (0.169)	-2.512*** (0.375)	-2.298*** (0.405)	-0.272 (0.198)	-9.731*** (0.744)	-10.77*** (0.820)	-2.682*** (0.553)	-6.476 (14.34)	-5.881 (29.98)	39.71 (24.24)
Constant	11.60 (22.95)	-101.2*** (25.29)	-27.43** (13.50)	-145.6*** (25.82)	-138.4*** (27.90)	18.40 (12.70)	-515.4*** (46.79)	-570.3*** (51.17)	-88.64** (35.60)	-265.9 (664.7)	-331.7 (1,374)	1,510 (1,097)
Observations	810	810	810	732	732	732	564	564	564	97	97	97
R-squared	0.059	0.181	0.838	0.112	0.152	0.902	0.340	0.379	0.846	0.013	0.538	0.738
Country FE	NO	NO	YES	NO	NO	YES	NO	NO	YES	NO	NO	YES
Year FE	NO	YES	YES	NO	YES	YES	NO	YES	YES	NO	YES	YES
Clustered SE	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Notes: Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Source: WIID and GGDC data, our calculations.

**Table 3: Regression results, with manufacturing employment share, by income group**

	High income			Upper middle income			Lower middle income			Low income		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	No FE	Year FE	Year&Cy FE	No FE	Year FE	Year&Cy FE	No FE	Year FE	Year&Cy FE	No FE	Year FE	Year&Cy FE
Manufacturing emp. share	-75.60*** (15.80)	-99.09*** (18.36)	-57.58*** (10.64)	-2.398 (21.96)	3.488 (23.20)	17.25 (12.96)	64.57** (28.33)	77.46*** (29.91)	107.0*** (32.24)	-283.6 (204.1)	45.65 (368.6)	-1,865*** (415.1)
Manufacturing emp. share <sup>2</sup>	126.3*** (35.12)	165.7*** (38.86)	107.6*** (22.83)	-145.9** (68.99)	-167.3** (72.56)	-136.1*** (36.77)	-1,013*** (173.4)	-1,098*** (183.5)	-526.6*** (168.8)	654.7 (2,915)	-7,393 (6,314)	20,243*** (6,502)
Constant	44.23*** (1.742)	49.30*** (3.265)	55.11*** (1.587)	54.41*** (1.664)	56.51*** (4.654)	43.47*** (1.781)	54.76*** (0.991)	54.66*** (6.213)	48.54*** (3.494)	62.86*** (3.259)	58.03*** (7.068)	77.95*** (6.153)
Observations	769	769	769	696	696	696	546	546	546	96	96	96
R-squared	0.055	0.076	0.841	0.079	0.103	0.913	0.345	0.377	0.840	0.195	0.547	0.760
Country FE	NO	NO	YES	NO	NO	YES	NO	NO	YES	NO	NO	YES
Year FE	NO	YES	YES	NO	YES	YES	NO	YES	YES	NO	YES	YES
Clustered SE	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Notes: Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Source: WIID and GGDC data, our calculations.

## A Economic Transformation Database results

We extend the analysis with broader coverage of Africa and Asia using an alternative dataset based on the WIID Companion (UNU-WIDER 2022a) and the Economic Transformation Database (ETD; Kruse et al. 2022). This section follows the structure of the main analysis.

The pooled sample confirms earlier findings: both GDP per capita and manufacturing employment share are associated with declining inequality (Figures A1 and A2).

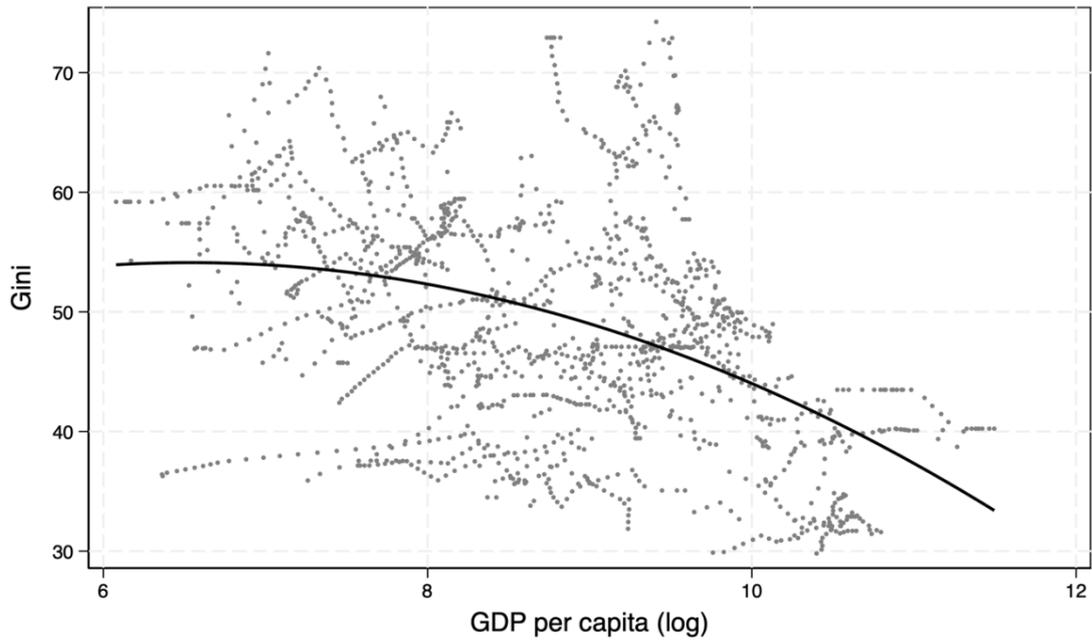
By income group, high-income countries show a convex, downward-sloping relationship between GDP per capita and inequality (Figure A3). Upper-middle- and lower-middle-income groups exhibit inverted U-shaped patterns, though scatter plot evidence suggests that results may be driven by a single country in each group and the common trend is a decline in inequality. Low-income countries follow a concave but shallower curve.

Manufacturing employment share is negatively associated with inequality across all income groups, though the slope varies (Figure A4). In upper-middle-income countries, inequality declines sharply before flattening at the highest employment shares.

Regional patterns for GDP per capita and inequality show a steep decline only in Latin America and the Caribbean and in Europe and Central Asia (the latter represented by Türkiye alone)—see Figure A5. South Asia exhibits an upward trend in the Gini coefficient. Other regions produce flatter fitted curves, while scatter points suggest more variability in inequality patterns of individual countries.

Regional relationships between manufacturing-driven structural transformation and inequality in Latin America and the Caribbean, Europe and Central Asia, and South Asia show little change in inequality across employment shares (Figure A6). The Middle East and North Africa region suggests a slight increase in the Gini coefficient. Lastly, Sub-Saharan Africa, and particularly East Asia and the Pacific, display a downward trend in income inequality associated with rising manufacturing employment.

**Figure A1: The relationship between GDP per capita and inequality (all countries)**



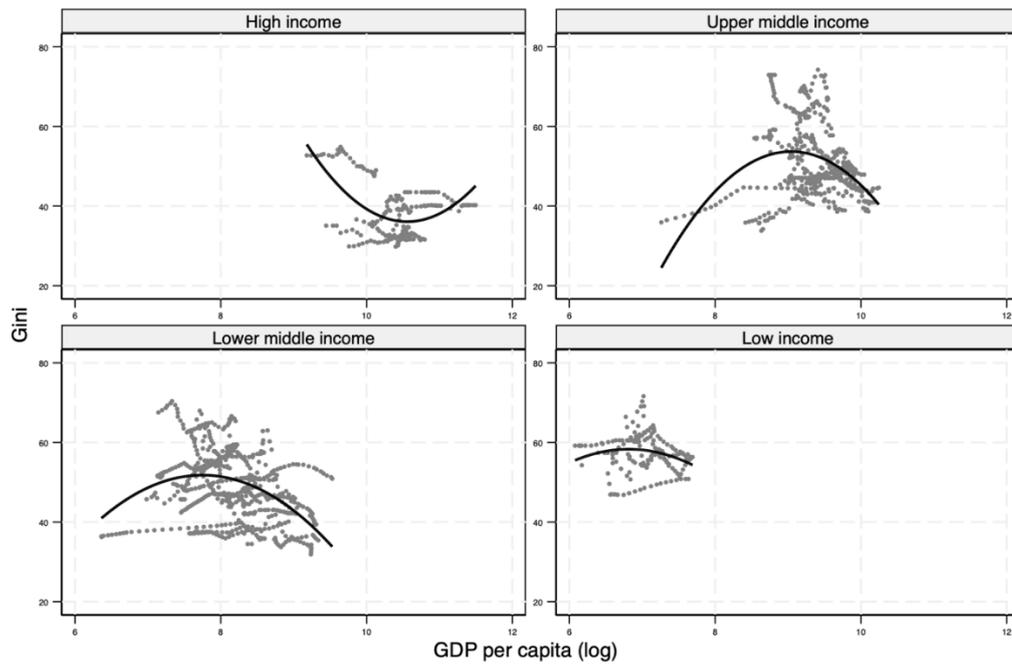
Source: WIID and ETD data, our calculations.

**Figure A2: The relationship between manufacturing employment share and inequality (all countries)**



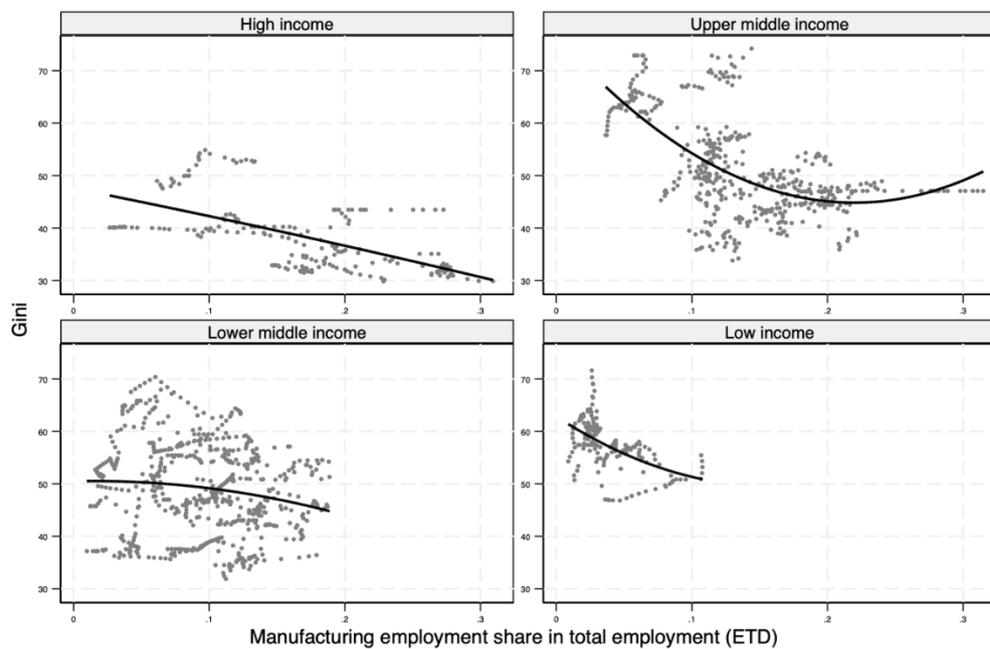
Source: WIID and ETD data, our calculations.

**Figure A3: The relationship between GDP per capita and inequality (by income level)**



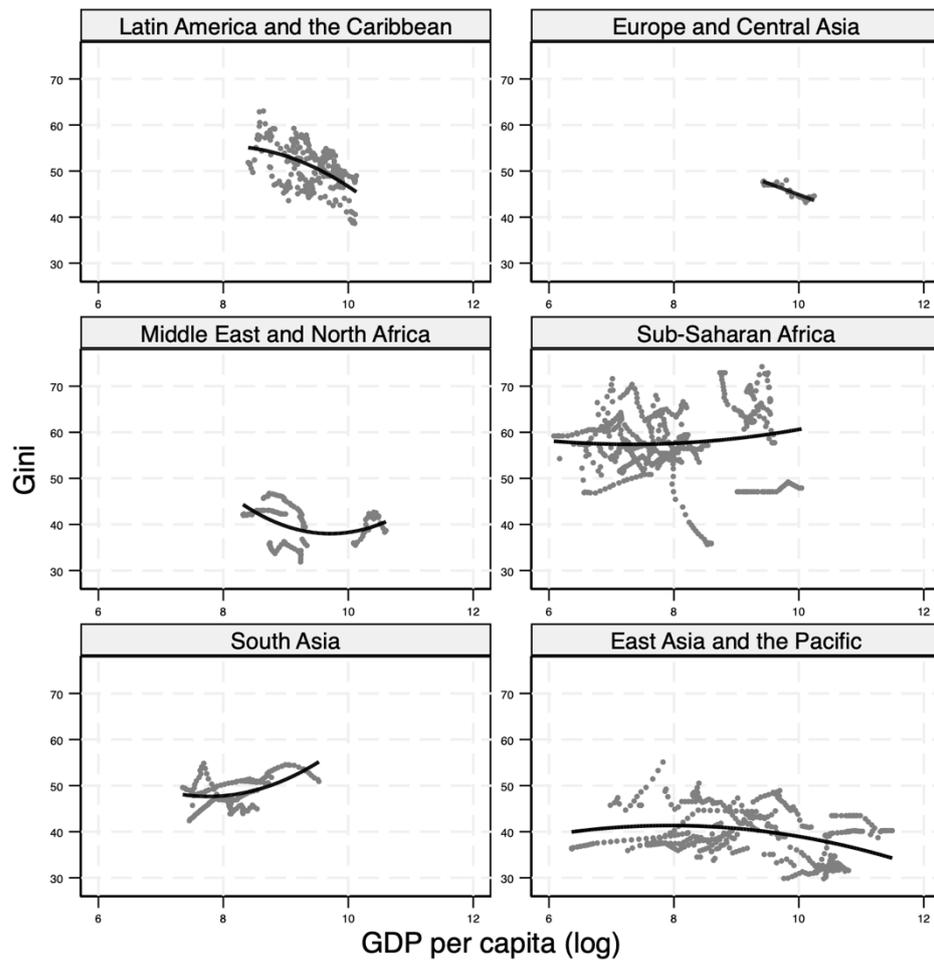
Source: WIID and ETD data, our calculations.

**Figure A4: The relationship between manufacturing employment share and inequality (by income level)**



Source: WIID and ETD data, our calculations.

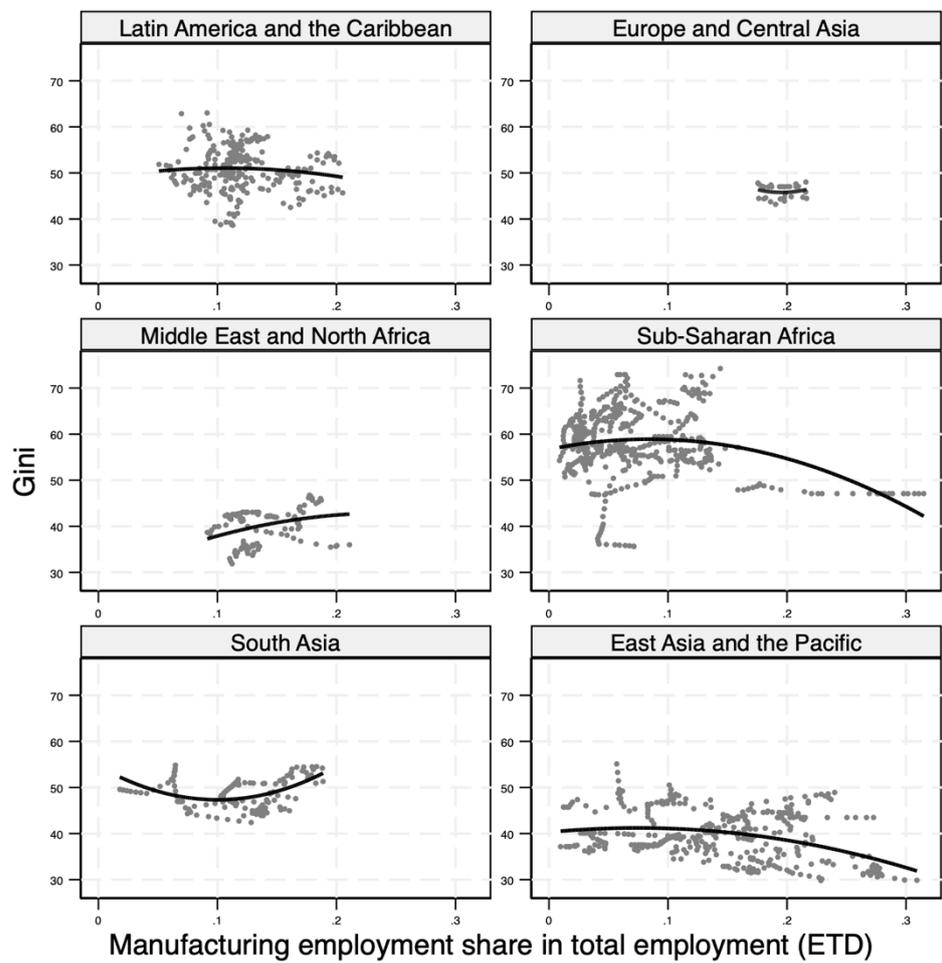
**Figure A5: The relationship between GDP per capita and inequality (by region)**



Note: The close curve fit reflects the limited representation in the Europe and Central Asia region with only one country (Türkiye) included in the sample.

Source: WIID and ETD data, our calculations.

**Figure A6: The relationship between manufacturing employment share and inequality (by region)**



Note: The close curve fit reflects the limited representation in the Europe and Central Asia region with only one country (Türkiye) included in the sample.

Source: WIID and ETD data, our calculations.

**Table A1: List of countries by income group, GGDC dataset**

<b>High income</b> (14 countries)	<b>Upper middle income</b> (13 countries)	<b>Lower middle income</b> (11 countries)	<b>Low income</b> (2 countries)
Chile	Argentina	Bolivia	Ethiopia
Denmark	Botswana	Egypt	Malawi
France	Brazil	Ghana	
Hong Kong	China	India	
Italy	Colombia	Kenya	
Japan	Costa Rica	Morocco	
Korea, Republic of	Indonesia	Nigeria	
Netherlands	Malaysia	Philippines	
Singapore	Mauritius	Senegal	
Spain	Mexico	Tanzania	
Sweden	Peru	Zambia	
Taiwan	South Africa		
United Kingdom	Thailand		
United States			

**Table A2: List of countries by world region, GGDC dataset**

<b>East Asia and the Pacific</b> (10 countries)	<b>Europe and Central Asia</b> (7 countries)	<b>Latin America and the Caribbean</b> (9 countries)	<b>Sub-Saharan Africa</b> (11 countries)	<b>Middle East and North Africa</b> (2 countries)
China	Denmark	Argentina	Botswana	Egypt
Hong Kong	France	Bolivia	Ethiopia	Morocco
Indonesia	Italy	Brazil	Ghana	
Japan	Netherlands	Chile	Kenya	<b>North America</b>
Korea, Republic of	Spain	Colombia	Malawi	(1 country)
Malaysia	Sweden	Costa Rica	Mauritius	United States
Philippines	United Kingdom	Mexico	Nigeria	
Singapore		Peru	Senegal	<b>South Asia</b>
Taiwan		Venezuela	South Africa	(1 country)
Thailand			Tanzania	India
			Zambia	

**Table A3: List of countries by income group, ETD dataset**

<b>High income</b> (7 countries)	<b>Upper middle income</b> (16 countries)	<b>Lower middle income</b> (22 countries)	<b>Low income</b> (6 countries)
Chile	Argentina	Bangladesh	Burkina Faso
Hong Kong	Botswana	Bolivia	Ethiopia
Israel	Brazil	Cambodia	Malawi
Japan	China	Cameroon	Mozambique
Korea, Republic of	Colombia	Egypt	Rwanda
Singapore	Costa Rica	Ghana	Uganda
Taiwan	Ecuador	India	
	Indonesia	Kenya	
	Malaysia	Laos	
	Mauritius	Lesotho	
	Mexico	Morocco	
	Namibia	Myanmar	
	Peru	Nepal	
	South Africa	Nigeria	
	Thailand	Pakistan	
	Türkiye	Philippines	
		Senegal	
		Sri Lanka	
		Tanzania	
		Tunisia	
		Vietnam	
		Zambia	

**Table A4: List of countries by world region, ETD dataset**

<b>East Asia and the Pacific</b> (14 countries)	<b>Latin America and the Caribbean</b> (9 countries)	<b>Sub-Saharan Africa</b> (18 countries)	<b>Middle East and North Africa</b> (4 countries)	<b>Europe and Central Asia</b> (1 country)
Cambodia	Argentina	Botswana	Egypt	Türkiye
China	Bolivia	Burkina Faso	Israel	
Hong Kong	Brazil	Cameroon	Morocco	<b>North America</b>
Indonesia	Chile	Ethiopia	Tunisia	(0 countries)
Japan	Colombia	Ghana		no observations
Korea, Republic of	Costa Rica	Kenya	<b>South Asia</b>	
Laos	Ecuador	Lesotho	(5 countries)	
Malaysia	Mexico	Malawi	Bangladesh	
Myanmar	Peru	Mauritius	India	
Philippines		Mozambique	Nepal	
Singapore		Namibia	Pakistan	
Taiwan		Nigeria	Sri Lanka	
Thailand		Rwanda		
Vietnam		Senegal		
		South Africa		
		Tanzania		
		Uganda		
		Zambia		