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26-7 China's Mercantilist Squeeze on Developing Countries

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ABSTRACT

China's resurgent trade surplus has revived concern in the United States and Europe, but consequences for low- and middle-income countries (LMICs) remain underappreciated. This paper documents a "China Squeeze": China's compression of the industrialization space poorer economies need in labor-intensive manufacturing. Using historical benchmarks and labor-endowment comparisons, we show that China, despite becoming richer and moving up the technology ladder, still commands a historically unusual share of global low-skilled manufacturing export markets. We estimate that this squeeze costs LMICs hundreds of billions of dollars in forgone exports. It also operates through rising Chinese import competition in LMIC markets and China's limited absorption of low-skilled imports from poorer countries. Macro evidence suggests that policy distortions, including exchange rate undervaluation, may have amplified the squeeze. The central concern is developmental: China's export strength may close off pathways to industrialization for poorer economies.

JEL Codes: F13; F14; F16; F43; F63; O14; O19; O24

Keywords: China, export competition, low- and middle-income countries, industrialization, low-skill manufacturing, value-added trade, China shock, exchange-rate policy

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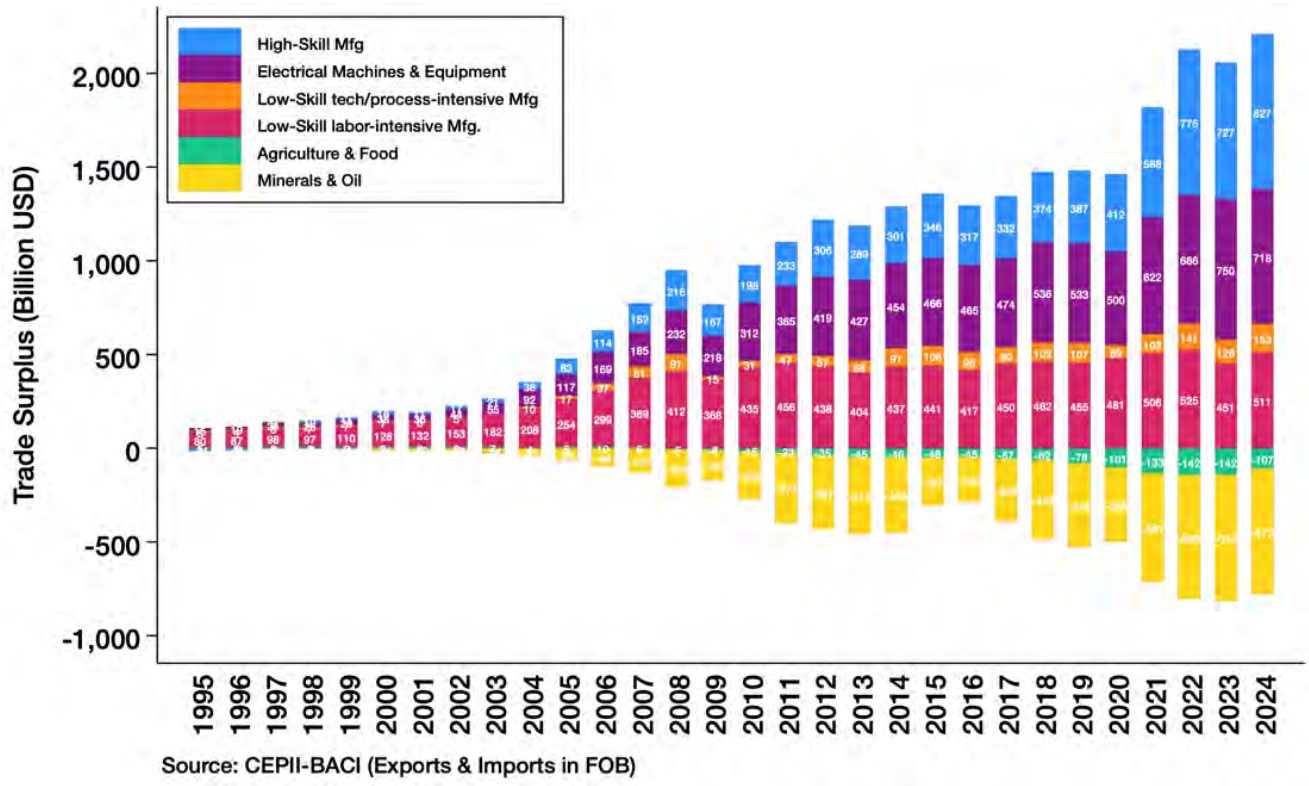
I. INTRODUCTION

China's trade surplus is again a source of alarm in the United States and Europe (Bayoumi and Gagnon 2026). In the United States, President Donald J. Trump's tariffs have drawn political force from the view that China's surplus hollowed out American manufacturing—a claim given empirical weight by Autor, Dorn, and Hanson (2013). In Europe, China's rise in the auto industry has triggered existential anxiety, especially in Germany, whose postwar manufacturing success rested heavily on its mastery of the internal combustion engine. The International Monetary Fund's latest Article IV report on China now warns explicitly about the consequences of China's large and rising surplus for its "trading partners."

Far less attention has been paid to what China's surplus means for low- and middle-income countries (LMICs). This neglect is striking because a large share of China's manufacturing surplus—between $0.7 trillion and $1.4 trillion out of a total of about $2.2 trillion—is concentrated in low-skill-intensive sectors such as apparel and footwear, precisely where LMICs compete most directly (figure 1).

Figure 1. China's trade surplus by category, 1995-2024



In this paper, we address the "China Squeeze": the compression of the development space available to countries that hope to industrialize through labor-intensive manufacturing. For LMICs, the China Squeeze operates through three channels. The first and perhaps the most important is competition in global export markets. The second is import competition in their own domestic markets—the channel emphasized in the original "China Shock" literature, beginning with Autor, Dorn, and Hanson (2013). The third is limited access to the Chinese market.

This paper makes two contributions. First, we show that the squeeze operating through global export competition is unprecedented in magnitude, possibly displacing hundreds of millions in LMIC value-added in unskilled-labor-intensive exports; that the squeeze operating via imports into domestic markets is now larger for LMICs than for advanced economies; and that LMICs' access to China's markets is also more limited than what rich countries provided to LMICs at a comparable point in time.

Second, we ask whether the squeeze reflects fair competition or the effects of Chinese policy distortions. The evidence is necessarily suggestive: China does not release the firm-level data, labor force surveys, or hours-worked information needed for precise quantification. Still, the available evidence points to a role for an undervalued renminbi.

But the central development concern does not depend on how much of China's export strength reflects genuine productivity growth and how much reflects policy distortion. If China's exports are limiting the ability of poorer countries to industrialize and create jobs—and if the implied employment loss is on the order of hundreds of millions of jobs—that should concern their governments and China regardless of the underlying cause.

2. EXPORT COMPETITION

a. Measurement: Gross Exports Understate the China Squeeze

We show that China occupies even more export space when exports are measured in value-added terms rather than gross terms. Our preferred measure—*value-added exports for foreign final demand* (henceforth value-added exports)—is the value added generated within a country-sector that is ultimately absorbed abroad and does not return through global value chains. A country's global share of value-added exports therefore captures its share of the full global value chain, not merely its share of final goods crossing borders.

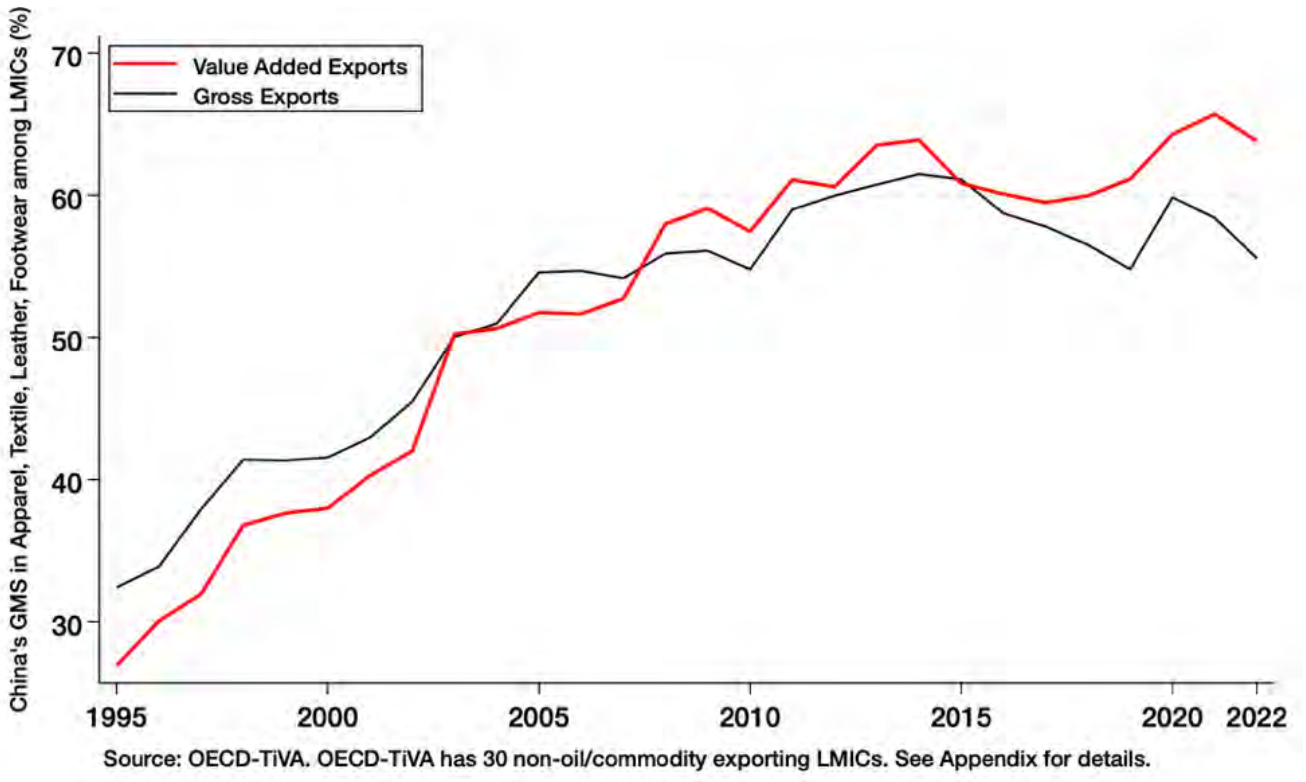
This distinction matters for measuring the China Squeeze. If Chinese value added generated in textiles displaces textile jobs in other LMICs, it does not matter whether that value added leaves China embodied in apparel, furniture, electronics, auto or any other product. What matters is that China is occupying a larger share of the global value chain in precisely the sectors where poorer countries would otherwise expect to compete.

Figure 2 sheds light on this phenomenon. Even though the share of China in global gross exports of key low-skilled goods has been declining since 2015 (black line), its share of global valued added exports has been rising and is now approaching 65 percent (red line). In fact, in 1995, China's value-added share was less than its gross exports share by about 5.5 percentage points; in 2023, the value-added share exceeds the gross export share by about 8.3 percentage points. The net swing is about 14 percentage points.

Put differently, China may be exporting fewer finished T-shirts to the rest of the world, but a larger share of the value embedded in those T-shirts is now being created inside China by Chinese labor and capital. More of the global supply chain is being localized within China.

This means that gross exports understate the squeeze. In value added, China has crowded out poorer countries to an even greater extent over the past decade, potentially narrowing one of the main pathways through which they could escape underdevelopment. The rest of our analysis will thus use value-added exports as the preferred measure.

Figure 2. China's export market share of key low-skilled goods (apparel, textiles, leather, and footwear) among low-and middle-income countries, 1995-2022



b. Quantifying the Squeeze

The most important China squeeze felt by LMICs is in global markets where they compete with China. The canonical trajectory of economic development in the post-World War II period is for countries to transition from agriculture to manufacturing, first in low-skilled manufacturing and then later on to high-skill manufacturing (Herrendorf, Rogerson, and Valentinyi 2013).

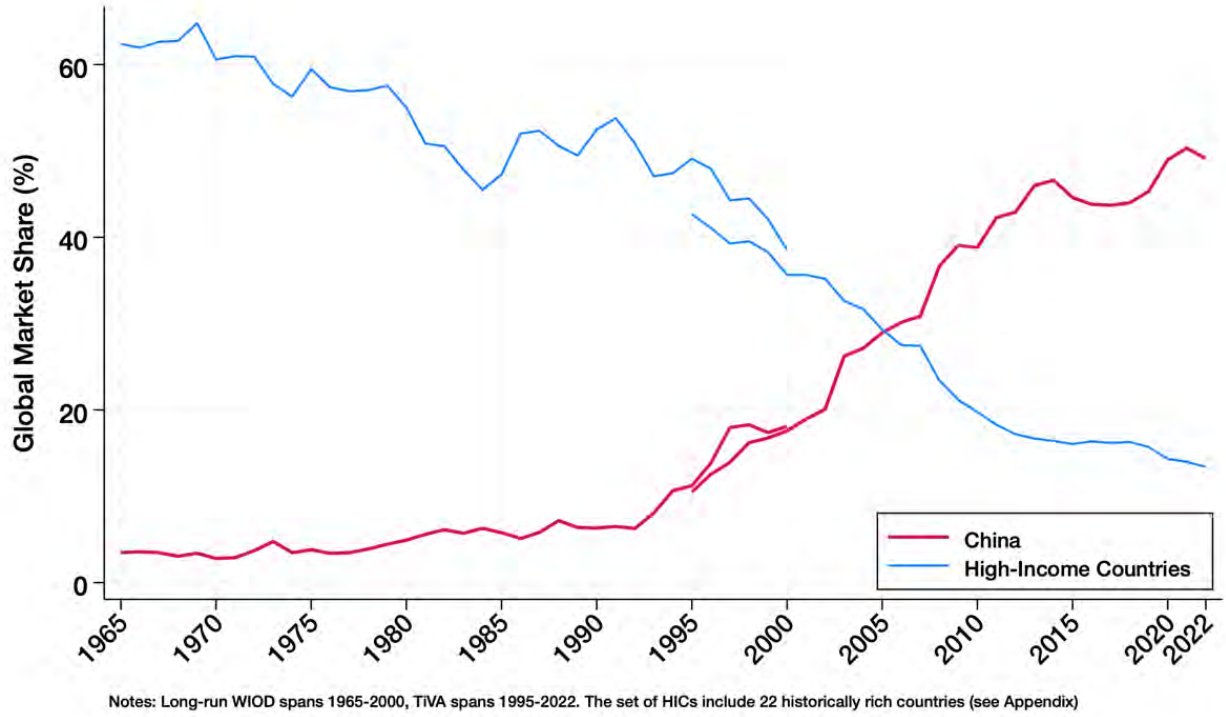
At the global level, this implies that high-income countries (HICs) that once specialized in low-skilled activities cede manufacturing export space to poorer countries that come along to occupy that space. Figure 3 plots this dynamic. The data come from two sources, long-run World Input-Output Database (WIOD) (1965-2000) and the Organization for Economic Cooperation and Development (OECD) Trade-in-Value Added (TiVA) database (1995-2022), and hence there are two lines each for China and the 22 advanced economies[1] that have been historically rich. For transparency, we don't splice these data.

In 1965, advanced economies accounted for about 60 percent of global value-added exports in four key low-skilled manufacturing sectors, i.e., apparel, leather, textiles, and footwear. Over time this share declined and began to be occupied first by the East Asian tigers and, beginning in the late 1990s, by China. Today

[1] The 22 richest Western economies are Australia, Austria, Belgium, Canada, Germany, Denmark, Spain, Finland, France, the United Kingdom, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Sweden, Switzerland, and the United States.

China accounts for about 50 percent of the global market The question is whether China, with its rising prosperity, is continuing to behave like its richer counterparts and ceding export space to poorer followers or to behave unlike them and continuing to occupy space.

Figure 3. Share of global value-added exports in four key labor-intensive sectors (apparel, textiles, leather, and footwear), 1965-2022



Notes: Long-run WIOD spans 1965-2000, TiVA spans 1995-2022. The set of HICs include 22 historically rich countries (see Appendix)

Next, in order to compare China with other countries competitive in low-skilled exports, we confine our sample to low- and middle-income countries. Although there is only one source of data on disaggregated exports—UN COMTRADE database—there are in fact multiple data sets on such exports produced by OECD, CEPII-BACI, and the Harvard Growth Atlas. Although they process the data in different ways, they all seem to suggest that China's "global" (amongst the sample of LMICs) gross export market share peaked in the mid-2010s at just below 40 percent (see appendix figure D.1). So, on this metric China is not ceding space but has stopped occupying increasing amounts of it.

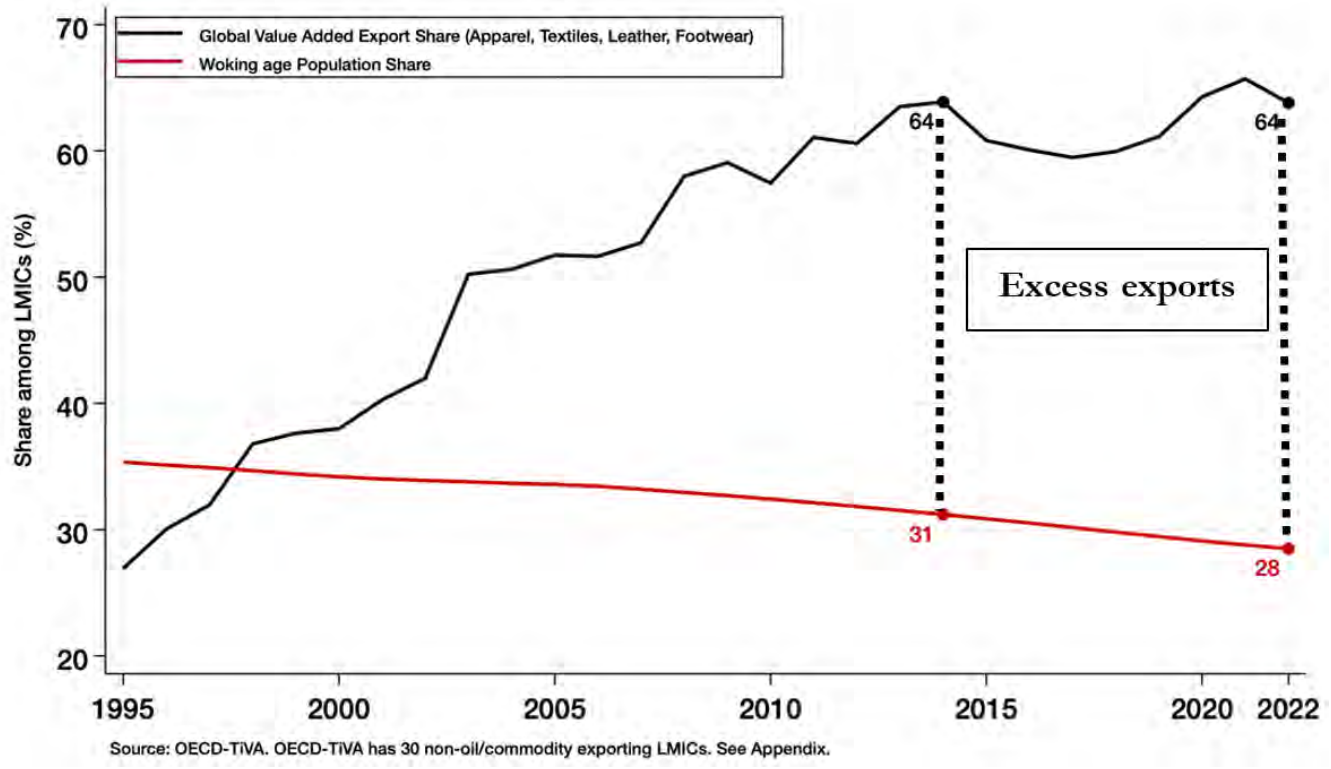
c. Assessing the "Squeeze"

To assess the scale of the "China Squeeze," we need a benchmark. We propose two. The first is based on labor endowments: given their abundance of low-skilled labor, how large a share of global labor-intensive manufacturing should LMICs plausibly command? The second is historical: when today's advanced economies were as rich as China is now, how much of the world's manufacturing space did they occupy? Together, these benchmarks allow us to ask not simply whether China is large, but whether its dominance has compressed the development space available to poorer countries in a way that is historically unusual.

Benchmark 1: Exports Relative to Labor Endowment

A useful benchmark is that, in labor-intensive manufacturing sectors, a country's share of world exports should be broadly commensurate with its share of the world's low-skilled labor endowment.[2] Figure 6 plots China's labor force share among LMICs against its global market share in value-added exports (among LMICs), in key low-skilled goods.[3] Note that the labor endowment share and global market share were similar at the start of the 21st century. Since then, the wedge between China's value-added export share and its labor-force share has increased substantially and suggests that China continues to occupy export space that could otherwise support tens of millions of manufacturing jobs in poorer economies. Between 2013 and 2023, China's value-added export share remained constant at 64 percent but its labor force share declined by 3 percentage points so that excess exports increased from 33 to 36 percent of LMICs global exports. For the four sectors captured in figure 4, this excess in value-added exports is $110 billion in 2022. For all low-skilled sectors overall captured in appendix figure D.1, excess value-added exports amount to $365 billion. The crowding out of LMIC exports by China is therefore substantial.

Figure 4. China's "excess" exports in apparel, textiles, footwear, and leather, 1995-2022
(export share relative to working-age population share)



Benchmark 2: A Historical Comparison

Apportioning China's excess exports between "legitimate" commercial advantage as opposed to policy interventions will never be easy. So as additional evidence, we turn to history. If assessments in the present

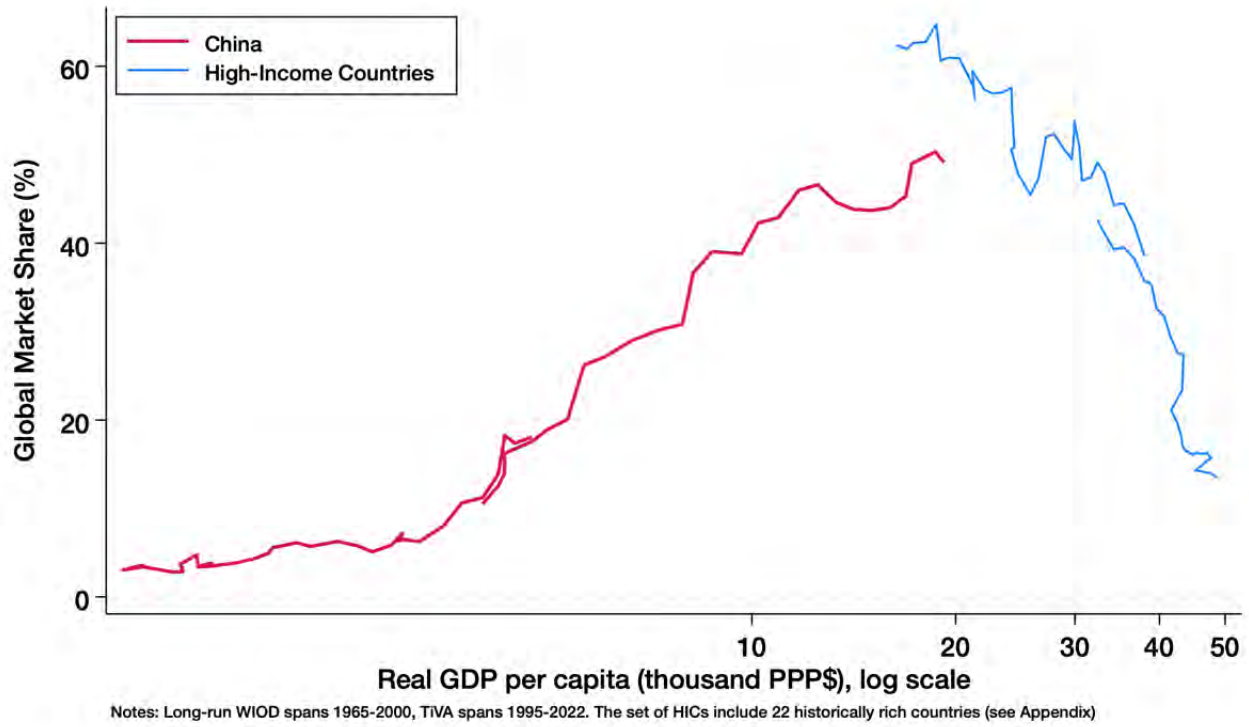
[2] In the Heckscher-Ohlin model, this would be true if value added per worker and export propensities, i.e., fraction of output that is exported, are the same across countries.
[3] Appendix figure D.2 plots this for all low-skilled goods.

cannot be definitive, another way of assessing whether China is exporting too much or too little of low-skilled goods is to look at history and see how and when richer countries transitioned away from such activities.

Figure 3 makes this comparison in chronological time, but to answer our question, we need to make two adjustments. First, to compare the levels and trajectories of the export market shares of rich countries to China's at similar levels of development (defined by GDP per capita), we need to plot them in development time, not chronological time. Figure 5 seems to suggest that China is not exporting more than the rich countries did at a comparable point in their development trajectories.

However, this comparison is incomplete. China today and high-income countries in the early 1960s may have had similar GDP per capita—roughly $19,000 in international dollars—but they reached that level in very different global trading environments. In the early 1960s, many developing countries were only weakly integrated into international trade, and the effective global market for manufactured exports was much smaller. A second adjustment is therefore needed: one that compares export performance not just at similar income levels but also relative to the size and tradability of the global market at the time. This adjustment accounts for changes in technology, transportation costs, trade policy, and preferences that have altered which products can be traded internationally and at what scale.

Figure 5. Global value-added export market share in development time (apparel, textiles, leather, and footwear), 1965-2022



Notes: Long-run WIOD spans 1965-2000, TiVA spans 1995-2022. The set of HICs include 22 historically rich countries (see Appendix)

A New Metric: Trade-Adjusted Market Shares

Comparisons of export market shares across time can be misleading when the degree of global trade integration differs substantially across periods. A country's share of world exports reflects dominance within

the tradable portion of global demand, not dominance over total world demand. When trade costs are high and global integration is limited, only a small fraction of sectoral output is traded internationally. In such settings, a large export share represents dominance over a relatively small contestable market.

By contrast, in highly integrated periods, the tradable portion of global demand is much larger; therefore, a given export share corresponds to a much greater reach into global absorption. To ensure comparability across eras with different levels of openness, export market shares should therefore be adjusted to account for the size of the tradable market.

We construct a trade-adjusted share of world absorption defined as:

$$s_{it}^{A}(g) = \frac{X_{it}(g)}{E_{Wt}(g)} = \underbrace{\left(\frac{X_{it}(g)}{X_{Wt}(g)}\right)}_{GMS} \times \underbrace{\left(\frac{X_{Wt}(g)}{E_{Wt}(g)}\right)}_{\lambda}$$

$X_{it}(g)$ is the exports of good *g* at time *t* by country *i* and $E_{Wt}(g)$ is the total expenditure on good *g* by the world. Thus, a country's exports of good *g* as a share of world expenditure on that good can be calculated by multiplying its global market share with $\lambda_t(g)$. The second term, $\lambda_t(g) = \frac{X_{Wt}(g)}{E_{Wt}(g)}$, is a sectoral tradability index measuring the share of global sectoral use of good *g* accounted for by cross-border flows.

This adjustment changes the denominator from world exports to world absorption. While the standard export share measures dominance within cross-border shipments, the trade-adjusted measure captures the fraction of total global demand that is supplied by a country through trade. In periods when trade is limited and $\lambda_t(g)$ is small, export shares tend to overstate global reach; in more integrated periods, when $\lambda_t(g)$ is larger, export shares correspond to a much broader economic footprint. The adjustment is therefore not a mechanical rescaling but a shift to an economically meaningful denominator.

The importance of this correction can be illustrated by comparing Europe in 1965 and China today in textiles. Suppose Europe held 60 percent of world textile exports in 1965, while China holds 50 percent today. If global textile tradability was 15 percent in 1965 but 45 percent today, Europe's trade-adjusted share would equal $0.60 \times 0.15 = 9$ percent of world absorption, whereas China's would equal $0.50 \times 0.45 = 22.5$ percent. Although Europe's raw export share was higher, China's reach into global demand through trade is substantially larger once differences in global integration are taken into account.

The trade-adjusted share should therefore be interpreted as a measure of global reach through trade. It quantifies the fraction of total world spending in a sector that is effectively supplied by a country via cross-border transactions. This measure is invariant to changes in the overall size of the tradable market and is consistent with modern quantitative trade frameworks, where bilateral expenditure shares relative to total absorption are the core objects of interest. By grounding comparisons in world absorption rather than world exports, the adjusted measure provides a theoretically consistent and policy-relevant benchmark for assessing structural dominance across eras with different degrees of globalization.

With these two adjustments, we can attempt to answer the question of whether China is ceding space to poorer countries.

Figure 6. Adjusted global value-added export market share in development time (apparel, textiles, leather, and footwear), 1965-2022

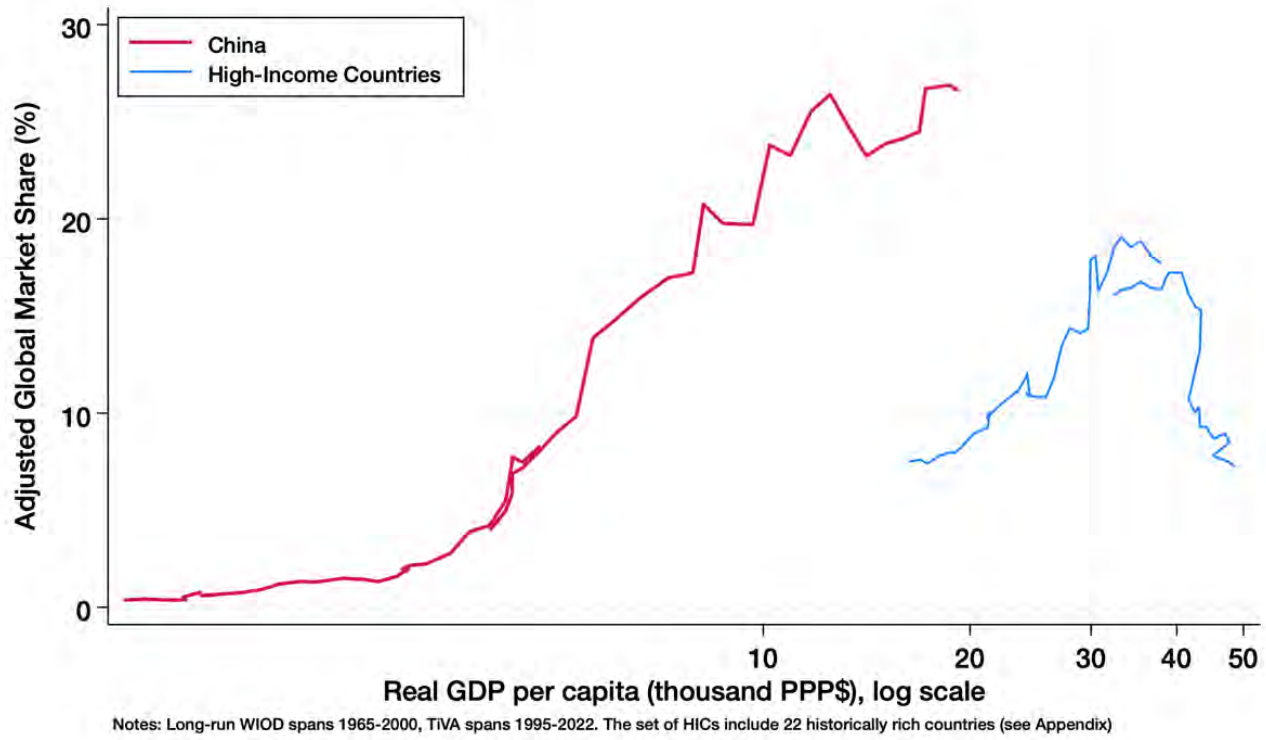


Figure 6 plots tradability adjusted global value-added export market share in four canonical unskilled-labor activities with that of rich countries in development time.[4] The result is striking. At today's level of China's per capita GDP, rich countries' global export market share was 8 percent compared with 27 percent for China. That difference—one measure of China not ceding space—multiplied by global gross exports today is equal to $140 billion in the four sectors captured in figure 6. [5] This is roughly the estimate we obtain from our earlier analysis in figure 4, where the excess gross exports (in a sample of LMICs) was about $110 billion. Two different approaches yield broadly similar estimates of China's "excess" exports.

In appendix figure D.3, we show the same for the electronics sector where the wedge is less stark and explained partly by the fact that electronics will include a number of higher-skilled activities as well. Almost as a placebo, we show the same chart for the auto and transport equipment sectors, and there we can see that China still has a ways to go before competing with, or even out-competing, rich countries.

4. THE CHINA SQUEEZE IN DOMESTIC MARKETS

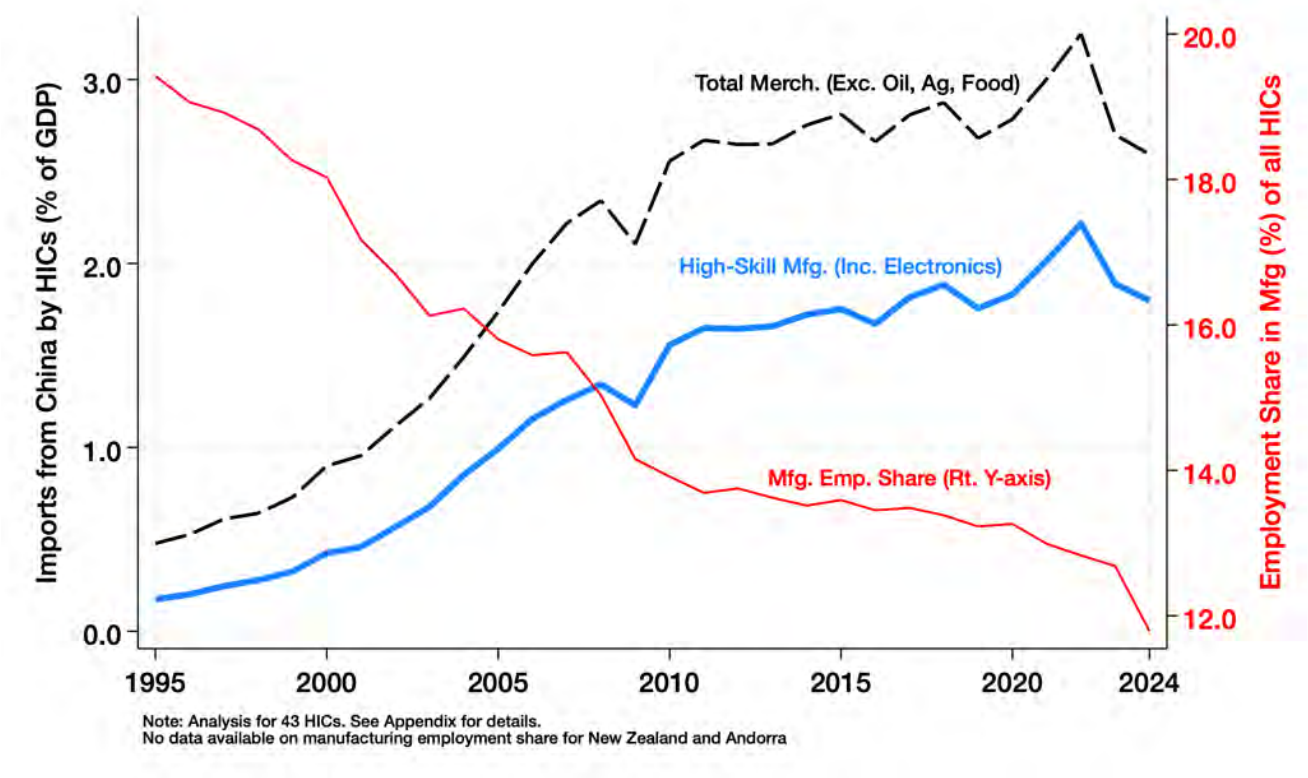
The second channel of the squeeze is via import competition, that is between Chinese imports and domestically produced goods. Here, the shock is large for low-income countries, arguably larger than it was

[4] In appendix figure D.3, we plot the same chart for other sectors.
[5] Even though rich-country global shares rise at China's current level of income, that is due to the adjustment for the differing tradability of goods over time. In fact, as figure 5 shows, rich countries' shares actually do decline from those levels of income.

for high-income countries. To keep our analysis comparable to Autor, Dorn, and Hanson (2013), we use the imports-to-GDP ratio as the measure of import competition.

Figure 7 plots imports from China as a share of GDP for rich economies. The ratio rose sharply after 1995, from about 0.5 percent of GDP to 2.5 percent in 2010, just after the global financial crisis (GFC). This was China Shock 1.0. Since then, Chinese imports into rich economies have risen more modestly, reaching about 3 percent of GDP. But the China Shock that rich countries are experiencing now should not be measured by total imports. China Shock 1.0 itself led to specialization away from low-skilled activities in rich economies. To paraphrase President Trump, the United States can now make "tanks not T-shirts."[6]

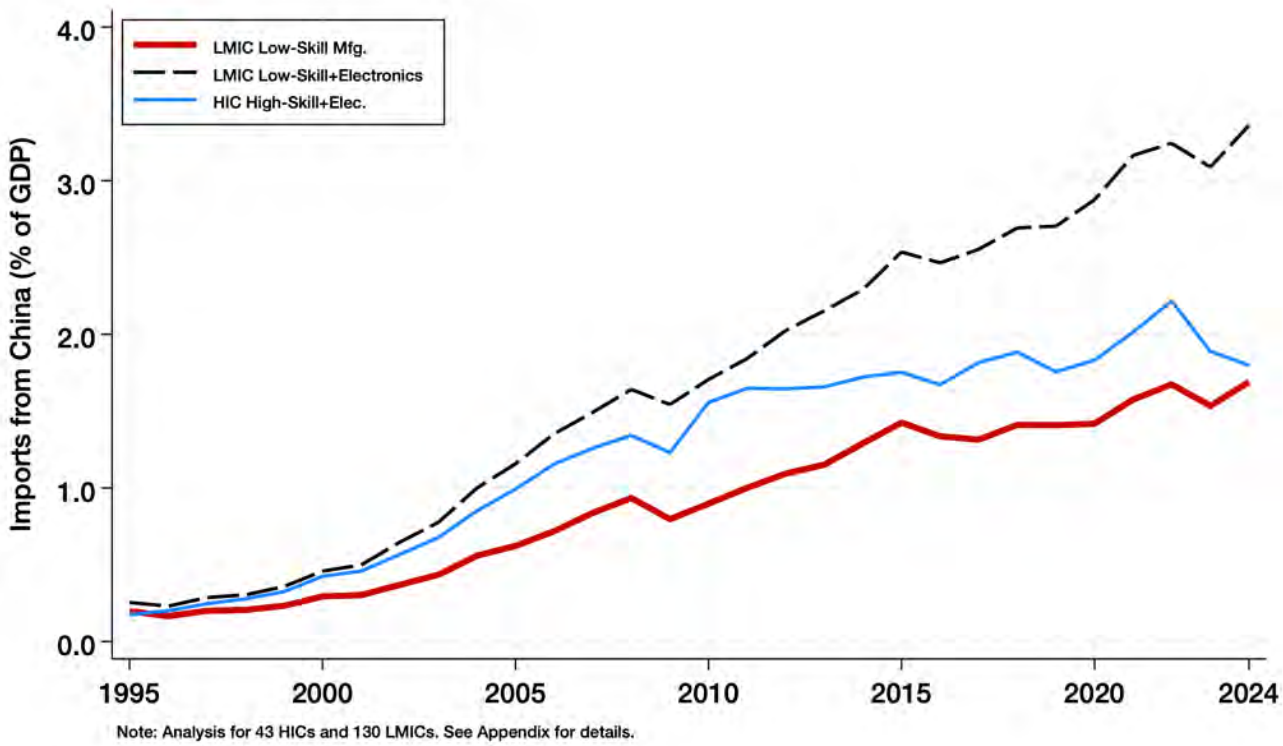
Figure 7. High-income countries' imports from China by category, 1995-2023



For that reason, figure 7 also shows (in blue) that the relevant China Shock for rich countries is now represented by activities that are no longer low-skilled. The relevant (non-low-skilled) imports now account for 2 percent of GDP, not 3 percent of GDP, and they have been rising at a slower pace than imports during the first China Shock. Since we include electronics in non-low-skilled imports (because we cannot distinguish high-skilled and low-skilled activities within electronics), the extent of competition from imports is probably exaggerated so that China Shock 2.0 is probably smaller in magnitude than its predecessor and occurs at a time when manufacturing employment is lower (figure 7, right axis).

[6] Jeff Mason, "Trump says US wants to make tanks, not T-shirts," Reuters, May 26, 2025. https://www.reuters.com/world/us/trump-says-us-wants-make-tanks-not-t-shirts-2025-05-25/.

Figure 8. Import competition from China in high-income and low- and middle-income countries, 1995-2024



By the same token, comparative advantage suggests that the relevant benchmark for LMICs is not all manufacturing, but low-skilled manufacturing—the activities in which poorer countries would ordinarily be expected to compete. Figure 8 plots imports from China as a share of GDP for LMICs and HICs. The dashed black line measures the China Shock for LMICs including electronics; the red line excludes electronics. The black line therefore likely overstates Chinese competition in low-skilled manufacturing, while the red line likely understates it: electronics contains some high-skilled activity, but much of its value chain now consists of low-skilled assembly tasks that are difficult to quantify separately.

The conclusion is robust to either treatment. Whether or not electronics is counted as low-skilled manufacturing, the post-GFC growth in the China Shock has been larger for LMICs than for HICs. The level of import competition from China is now very high for LMICs, and possibly greater than for rich countries, especially once the low-skilled segments of the electronics value chain are taken into account.

5. THE SQUEEZE IN CHINA'S MARKET OR IS CHINA IMPORTING ENOUGH?

So far, we have focused on China's exports. But a country's trade surplus is determined by its exports and imports. Brad Setser has argued that China's import volumes have been remarkably flat.[7] Does this apply to low-skilled goods as well?

[7] Brad Setser, China's Massive Surplus is Everywhere (Yet The IMF Still Has Trouble Seeing It Clearly), Council on Foreign Relations, November 12, 2025, https://www.cfr.org/articles/chinas-massive-surplus-everywhere-yet-imf-still-has-trouble-seeing-it-clearly.

Figure 9. Imports from other low- and middle-income countries by high-income countries and China

(Average 2020-2024, as a share of importer GDP)

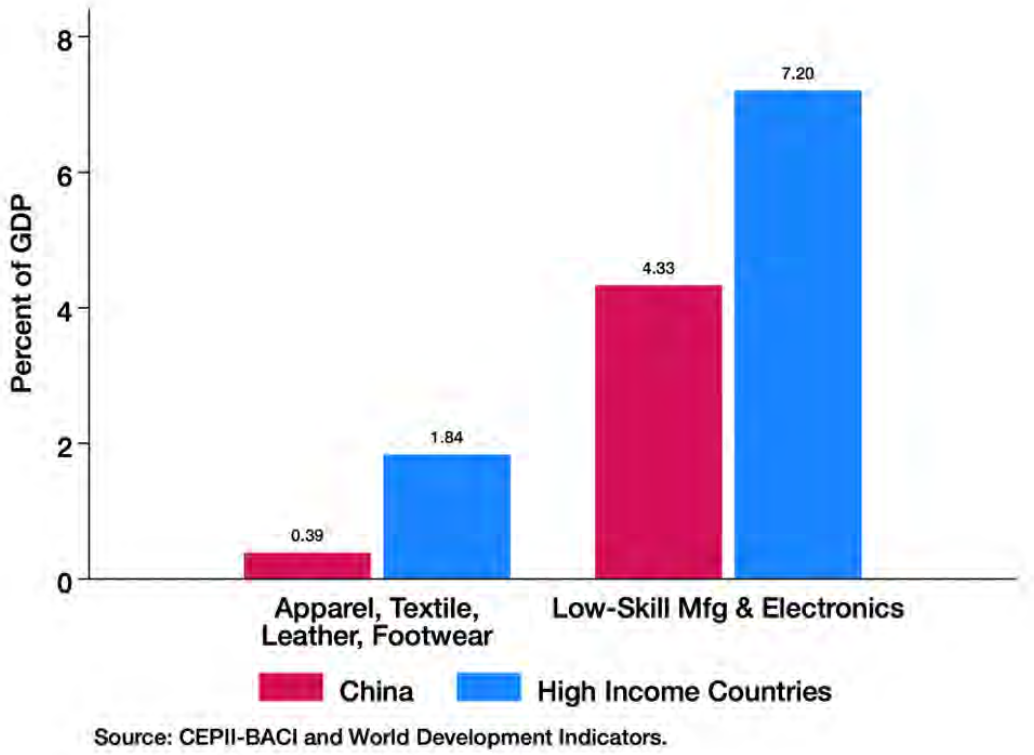
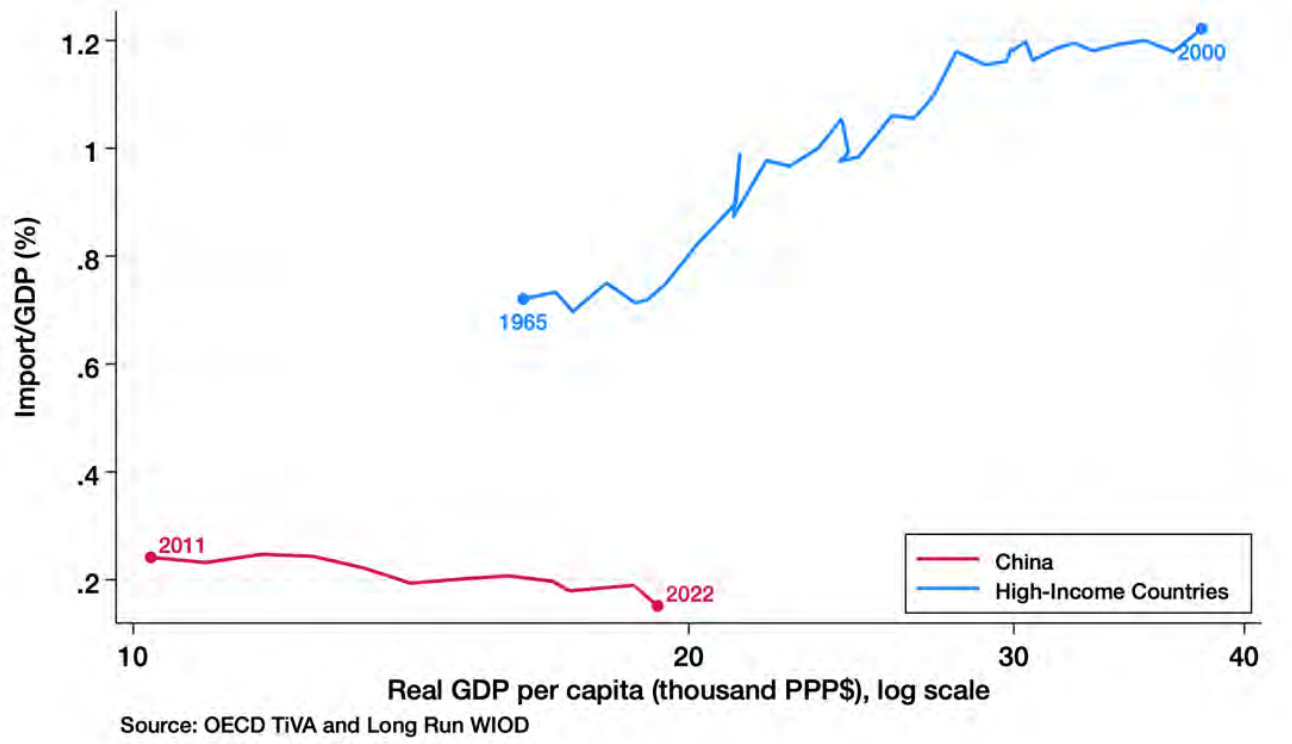


Figure 9 plots imports from LMICs by China (measured as exports to China from LMICs) of low-skilled goods and electronics. In both cases, China imports substantially less from LMICs than HICs do. But this could simply reflect the gravity intuition that China is poorer than HICs.

To address this, we undertake an exercise in the spirit of figure 7: how much is China importing of low-skilled goods today compared with what rich countries imported when their incomes were similar to China's today. Note that unlike figure 9, for a historical comparison in figure 10 we take imports[8] from the world rather than just LMICs. This is because in 1965 many rich countries of today were still middle-income. Figure 10 suggests that China is indeed importing substantially less. In 2022, China's imports of low-skilled goods were about 0.15 percent of GDP while those of HICs at a comparable point in development were five times greater. Moreover, it is striking that China's imports of low-skilled goods have been declining since 2011 when they should have been rising.

[8] Note that the sources of trade data in figures 9 and 10 are different. Figure 9 uses CEPII-BACI trade data that follows HS classification and figure 10 uses OECD-TiVA and WIOD that follow ISIC classification for products. Hence, a slight discrepancy is expected.

Figure 10. Apparel, textile, leather, and footwear imports as share of importer GDP, 2020-22



6. IS THE CHINA SQUEEZE "FAIR"?

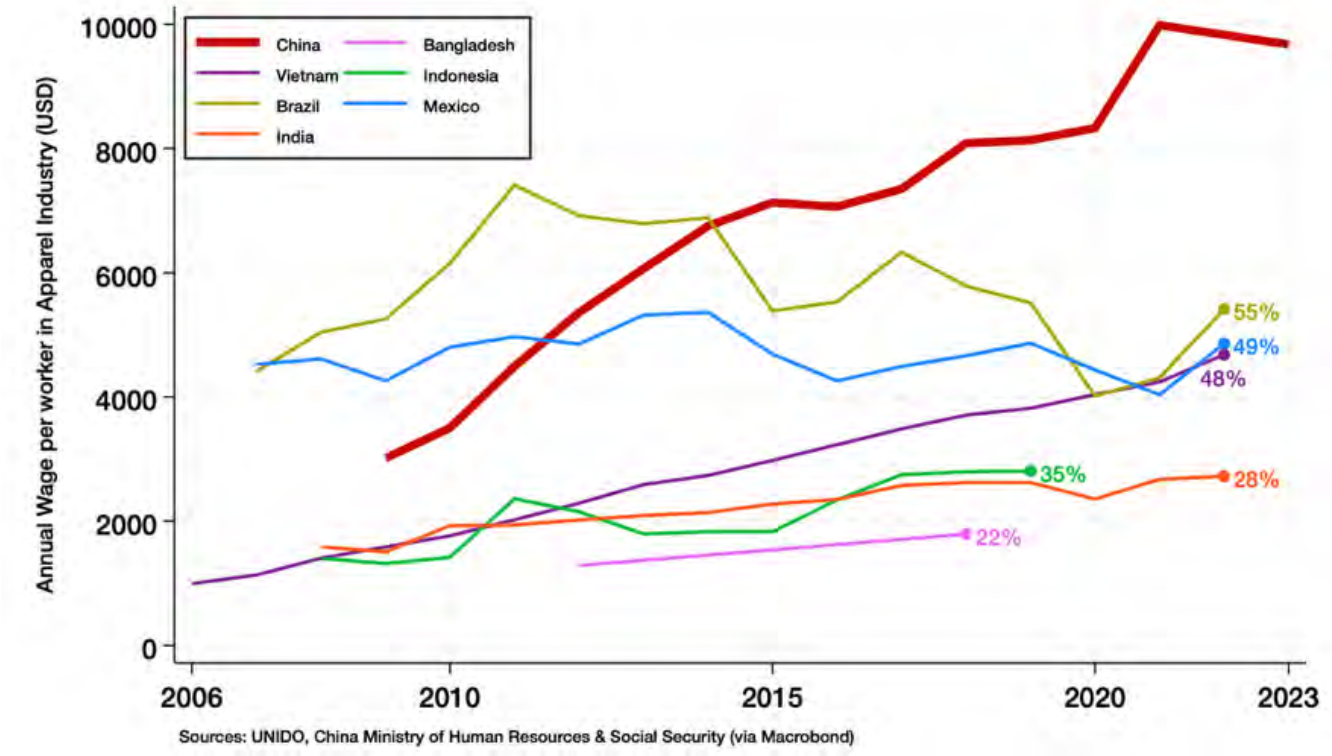
So far, we have documented that China has been occupying space in global export markets of low-skilled goods at historically unprecedented levels and not creating markets itself for low-skilled products of other LMICs. Both these result in job losses in LMICs. This should matter in and of itself to governments of LMICs. However, from another standpoint, it is fair to ask whether China's rise is due to legitimate increases in productivity or due to subsidies and distortionary policies. The latter would be more concerning.

Distinguishing policy distortions from underlying strength would require much more disaggregated firm-level data. But for over a decade now, such data are no longer available to researchers outside China, rendering serious analysis difficult. We can, however, provide suggestive evidence from macro data that some of the rise in China's dominance must be fueled by distortionary policies.

a. Wages

UNIDO's INDSTAT database has information on wages by sector. We find that China's manufacturing wages are now far higher than those in LMICs—and still increasing. For example, in apparel, the canonical labor-intensive sector, the annual wage in China averages around $10,000, which is roughly five times higher than in Bangladesh and four times higher than in India (figure 11). This makes China's persistent dominance very striking. However, even with such wage differentials, China's export strength might be less troubling if it stemmed purely from productivity gains related to underlying competitive factors such as scale, automation, and internal competition rather than from policy distortions.

Figure 11. Wages in the apparel sector in selected countries, 2005-22



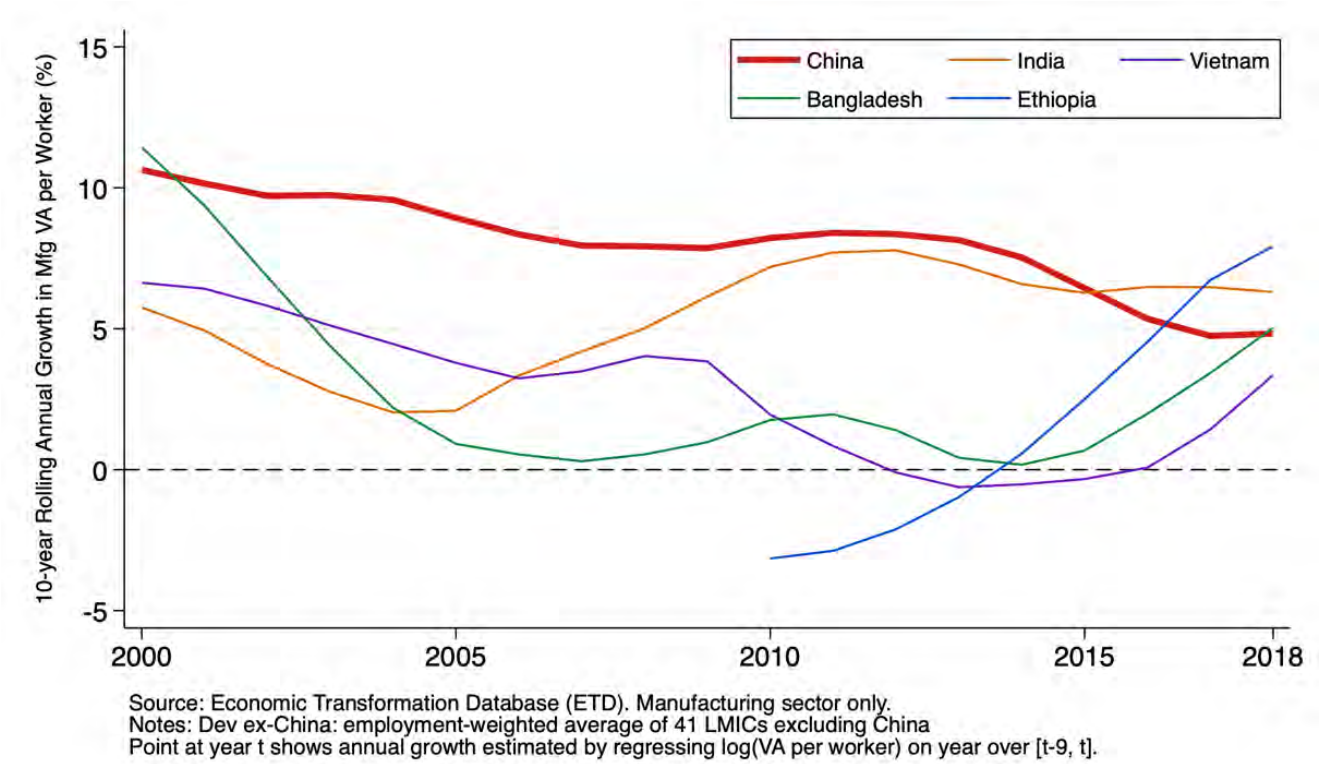
Note: Numbers in percent on the right of the lines refer to the country's wage as a fraction of China's wage.

b. Productivity

The Groningen Growth and Development Centre (GGDC) at the University of Groningen produces data on labor productivity by broad sectors. This shows that average annual manufacturing labor productivity growth in China has been declining steadily since the 2000s but especially after the mid-2010s. In fact, labor productivity growth since 2015 no longer exceeds that in key competitor LMICs (figure 12). Combining this with the more rapid wage growth for China compared with competitor countries (figure 11) suggests that China's unit labor cost (in dollars) advantage is declining.[9]

[9] The wage data in figure 11 do not account for hours worked. If Chinese workers spend longer hours in factories, we could be overestimating wage growth and loss of competitiveness (Laura Bicker, "The truth behind your $12 dress: Inside the Chinese factories fuelling Shein's success," BBC, January 12, 2025, https://www.bbc.com/news/articles/cdrylgvr77jo). By the same token, we could be overstating labor productivity growth too. These two could offset each other in unit labor cost calculations.

Figure 12. Productivity growth in the manufacturing sector, 2000-18
(real value added per worker in percent, 10-year rolling average)



Source: Economic Transformation Database (ETD). Manufacturing sector only.
Notes: Dev ex-China: employment-weighted average of 41 LMICs excluding China
Point at year t shows annual growth estimated by regressing log(VA per worker) on year over [t-9, t].

c. Policy Distortions

On policy distortions, the IMF has recently quantified four types of industrial policies (cash subsidies, tax benefits, subsidized credit, and subsidized land) and estimates that they amounted to about 4 percent of Chinese GDP in 2023.

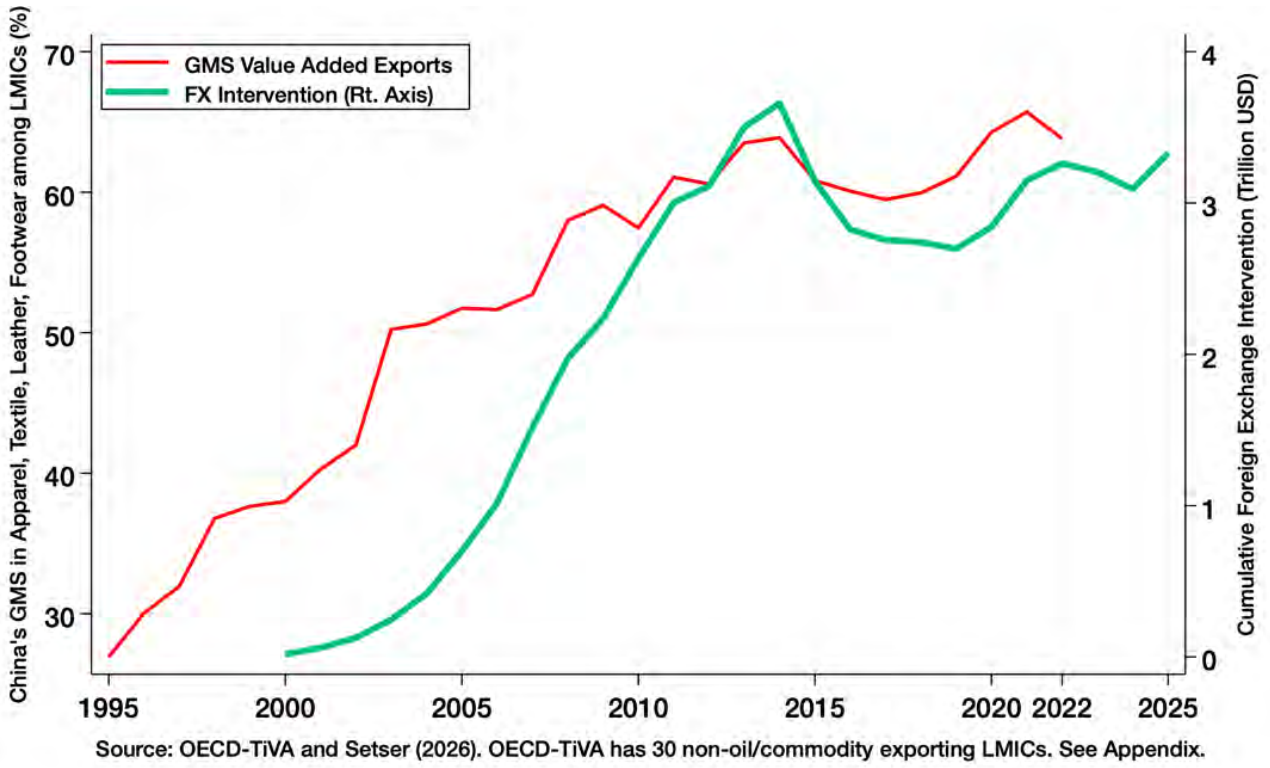
In another recent study by the Federal Reserve, the authors count sector-specific industrial policy interventions from the New Industrial Policy Observatory (NIPO) database and show that these are correlated with sectoral export performance between 2017 and 2024. In both these studies, it appears that interventions were relatively smaller and fewer for labor-intensive industries.

Therefore, the biggest source of policy distortion favoring unskilled labor sectors is probably China's exchange rate. In its latest report on China, the IMF estimates that the yuan's real effective exchange rate is undervalued by about 16 percent (with a range of 12 to 21 percent). Others argue that China's official data understate its current account balance and that the yuan has been undervalued in the last few years by anywhere between 20 and 30 percent and manifests as and caused increasingly by extensive foreign exchange market intervention (and reserve accumulation) by state banks, whereas previously undervaluation was sustained by intervention by the Chinese central bank, the People's Bank of China (PBOC) (Setser and Sobel 2025).[10]

[10] See chart 2 in Paul Krugman's Substack post, https://paulkrugman.substack.com/p/chinas-trade-surplus-part-ii.

In fact, there is suggestive—by no means conclusive—evidence pointing to the role of Chinese policy intervention in the foreign exchange market in favoring low-skill-intensive exports. Figure 13 plots foreign exchange intervention by the PBOC and state banks combined. The interesting, though not exact, correlation is in the last decade. Foreign exchange intervention peaked around 2014 as did China's value-added export share. For the next few years thereafter, China does start vacating export space, amounting to about $20 billion annually in the four labor-intensive sectors alone. When intervention resumes after 2019, China's global export market share rises, reaching its previous peak. A similar pattern manifests in gross export market share (see appendix figure D.1).

Figure 13. China's foreign exchange intervention and global export share in low-skilled sectors



Note: Intervention is measured as cumulative purchases/sales by PBOC and state banks, excluding forwards. Data are based on Setser (2026).

In fact, the period of reduced intervention and declining global market share coincided with a falling current account surplus, owing in part to the large post-GFC stimulus, which was concentrated in nontraded sectors. Conversely, the period of renewed intervention after 2018 was accompanied by a rising current account surplus.

More recently, China's rising exports—including in labor-intensive goods—also reflect a "vent-for-surplus" dynamic. Weak domestic demand, fierce domestic competition or "involution," rising excess capacity, and high youth unemployment have pushed firms to seek foreign markets. This has translated into aggressive price competition abroad: export volumes have risen even when revenues have remained muted (World Bank 2025).

7. CONCLUSION

Global imbalances, and in particular China's current account surplus, are resurfacing as an issue of concern. With the memory of China Shock 1.0 still etched in the minds of American policymakers, the focus is now increasingly on China's march into advanced sectors such as electric vehicles, batteries, and solar panels. Not enough attention is being paid to China's persistent, even rising, occupation of export space in low-skilled goods and the attendant impact on the development prospects of low- and middle-income countries—the China Squeeze. This impact—hundreds of billions of dollars in foregone LMIC exports—has been felt most acutely in global markets but also in China's imports in LMIC markets and low access to China's markets as well. The magnitudes are sizable enough to stymie their structural transformation and ability to escape from low- and middle-income status. To be sure, developing countries themselves will need to implement domestic actions to take advantage of the export opportunities, but this paper's main point is that those opportunities are being adversely shaped by China's exports and possibly also its actions.

The adverse effect of excess Chinese exports on growth in LMICs does not hinge on whether those exports are driven by productivity gains or distortions. What is important is that the magnitude and composition is unprecedented both from a historical perspective and given endowments. But that distortions like exchange rate manipulation—for which we provide suggestive evidence—have played a role makes the unfairness starker.

A normative implication for China follows from our findings. Recent events relating to US actions to undermine the rules-based trading order as well as military actions West Asia have created the perception that the United States is no more a benign hegemon. Opportunity has opened up for China to stake a claim to at least being a stable, even if not a benign, hegemon.

Charles Kindleberger famously argued that hegemons provide global public goods, such as financing during crises, resources for long-term development, and support for open markets. When the United States was the world's economic hegemon after World War II, it created manufacturing and export space for others—first Japan, then the Asian Tigers, and eventually China itself (figure 4). Its willingness to absorb imports and allow others to grow was an essential part of its global leadership. Yet today, as the Trump administration retreats from that role, China's actions will determine whether it can credibly replace the United States as a responsible provider of that critical global public good.

The pressure on LMICs is already evident in their growing trade actions against China. The recent unrest in Indonesia—a by-product of deindustrialization and exposure to Chinese competition—underscores what is at stake. To its credit, China has taken symbolic steps toward offering real leadership, including by voluntarily relinquishing its developing-country status at the World Trade Organization and granting duty-free access to poorer countries.

But these gestures will ring hollow unless China genuinely vacates the global manufacturing space. If China truly aspires to global leadership, it must internalize a simple truth: hegemons gain legitimacy not by dominating others, especially the poor, but by enabling their rise. The new China Squeeze is not just about economic consequences. It is also a test of whether China can serve as a fair steward of global prosperity or remain a formidable practitioner of beggar-thy-neighbor mercantilism.

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APPENDIX A Data and Methods

We use multiple complementary datasets for analysis in this paper. Trade data come from the CEPII-BACI dataset, OECD's TiVA dataset, and the long-run WIOD. Nominal GDP data are from the World Development Indicators. GDP data for Taiwan are from Penn World Table 11.0 and updated for 2024 from the IMF. Real GDP per capita is from the Maddison Project Database. Manufacturing employment share data for high-income countries comes from the International Labor Organization (ILO) and OECD. Sectoral value added per worker data are from the GGDC/UNU-WIDER Economic Transformation Database. We use working-age population data from the United Nations' World Population Prospects. Average wages for the apparel sector are from Macrobond for China and the UNIDO INDSTAT database for other countries. For robustness, we also use trade data from the UN COMTRADE database and the Atlas of Economic Complexity from the Harvard Growth Lab.

APPENDIX B Categorization of Countries

Rich Countries

We work with a set of **43 rich countries** listed below. However, when doing historical analysis, we focus only on the very rich countries from Western Europe and its offshoots.

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, Australia, Japan, Republic of Korea, New Zealand, Andorra, Iceland, Norway, Switzerland, United Kingdom, Canada, United States, Bulgaria, Croatia, Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia, Malta, Singapore, Chile, Panama, Uruguay, and Israel

In figures 4, 9, 10, and 12, the set of high-income countries includes the following 22 historically rich countries: Australia, Austria, Belgium, Canada, Germany, Denmark, Spain, Finland, France, the United Kingdom, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Sweden, Switzerland, and the United States. Long-run WIOD does not have data on Iceland, Luxembourg, New Zealand, Norway, and Switzerland. Hence, there are only 17 countries before 1995.

Low- and Middle-Income Countries

We work with a set of 130 LMICs + China.

Full Set: Democratic People's Republic of Korea, Afghanistan, Burkina Faso, Burundi, Central African Republic, Democratic Republic of the Congo, Eritrea, Ethiopia, the Gambia, Guinea-Bissau, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, Sudan, Togo, Uganda, Cambodia, Laos, Myanmar, Papua New Guinea, the Philippines, Vietnam, Kyrgyz Republic, Tajikistan, Uzbekistan, Bolivia, Haiti, Honduras, Nicaragua, Egypt, Morocco, Pakistan, Tunisia, Bangladesh, India, Nepal, Sri Lanka, Benin, Cameroon, Côte d'Ivoire, Eswatini, Ghana, Guinea, Kenya, Lesotho, Mauritania, Namibia, Nigeria, Senegal, Tanzania, Zambia, Zimbabwe, China, Indonesia, Malaysia, Thailand, Albania, Armenia, Belarus, Bosnia and Herzegovina, Georgia, Moldova, Serbia, Türkiye, Ukraine, Argentina, Brazil, Colombia, Cuba, Dominican Republic, El Salvador, Guatemala, Jamaica, Mexico, Paraguay, Peru, Botswana, Mauritius, South Africa, Syria, Yemen, Chad, South Sudan, Kiribati, Micronesia, Solomon Islands, Timor-Leste, Vanuatu, Djibouti, Jordan, Lebanon, West Bank and Gaza, Bhutan, Angola, Comoros, Republic of the Congo, São Tomé and Príncipe, Fiji, Marshall Islands, Mongolia, Samoa, Tonga, Tuvalu, Azerbaijan, Kazakhstan, Montenegro, North Macedonia, Turkmenistan, Belize, Dominica, Ecuador, Grenada, St. Lucia, St. Vincent and the Grenadines, Suriname, Venezuela, Algeria, Iran, Iraq, Libya, Maldives, Cabo Verde, Equatorial Guinea, Gabon, and Taiwan

When working with the TiVA dataset, we are restricted to the following 30 LMICs available that are also not small or commodity/oil exporters: Argentina, Bangladesh, Belarus, Brazil, Cambodia, Cameroon, China, Taiwan, Colombia, Côte d'Ivoire, Democratic Republic of the Congo, Egypt, India, Indonesia, Laos, Malaysia, Mexico, Morocco, Myanmar, Nigeria, Pakistan, Peru, the Philippines, Senegal, South Africa, Thailand, Tunisia, Türkiye, Ukraine, and Vietnam

APPENDIX C Classification of HS 2-Digit Categories by Skill and Production Intensity

This appendix describes the procedure used to classify HS 2-digit product categories into three mutually exclusive groups reflecting the skill and production intensity of manufacturing:

- **Low-skill labor-intensive**: Products for which the dominant factor input is low-wage manual labor, requiring limited capital equipment or technical knowledge. Production is readily relocatable to low-wage economies. Examples include garments, footwear, leather goods, furniture, and toys.
- **Low-skill technology/process-intensive**: Products requiring substantial physical capital—such as blast furnaces, rolling mills, or chemical reactors—but not high levels of human capital. Production is process-driven rather than design- or R&D-driven. Examples include iron and steel, base metal articles, and cutlery.
- **Medium/high-skill**: Products whose manufacture requires significant engineering expertise, process chemistry, precision manufacturing, or research and development. This category merges the UN's medium-skill and high-skill groups because the boundary between them is not consistently maintained across product lines and is not economically material for the purposes of this analysis. Examples include organic chemicals, pharmaceuticals, machinery, motor vehicles, aircraft, and electronics.

The classification covers HS 2-digit chapters 28 through 97 (manufactured goods).

Starting Point: UN Classification

The conceptual basis for the classification is the United Nations' taxonomy of manufactured goods by degree of manufacturing, defined at the SITC Revision 3 (SITC Rev. 3) three-digit level. This taxonomy is published by the United Nations Conference on Trade and Development (UNCTAD) as part of the *Trade and Development Report* statistical framework. It organizes manufactured goods into four groups of increasing skill and capital intensity:

UN Group	Label	Mapping to this study
TDRB	Labor-intensive and resource-intensive manufactures	Low-skill labor-intensive
TDRC	Low-skill and technology-intensive manufactures	Low-skill technology/process-intensive
TDRD	Medium-skill and technology-intensive manufactures	Medium/high-skill
TDRE	High-skill and technology-intensive manufactures	Medium/high-skill

Groups TDRD and TDRE are merged into a single medium/high-skill category in this study because the distinction between them is not consistently applied at the SITC 3-digit level and is immaterial for the analytical purposes of the paper.

The UN classification is defined at the SITC Rev. 3 three-digit level. We map these into HS categories using official concordance to determine the UN classification for the HS 2-digit chapter. For five chapters our final classification differ from the mechanical UN-concordance result. In each case, the override reflects a judgment that the concordance-based assignment does not align with the economic character of production for the typical manufacturing country exporting these goods.

Override 1: HS 47—Wood Pulp (Pulp of Wood or Other Fibrous Cellulosic Material)
Final classification: *Low-skill technology/process-intensive*
The UN taxonomy does not classify wood pulp at all: all 19 HS 6-digit lines in this chapter map to SITC codes that fall outside the manufactured goods hierarchy (raw material designation). However, the production of wood pulp is a capital-intensive industrial process—involving chemical pulping, bleaching, and large-scale plant investment—closely analogous to the production of base metals such as steel. Accordingly, this chapter is assigned to the low-skill technology/process-intensive bucket rather than left unclassified.

Override 2: HS 71—Jewelry and Precious Stones
Final classification: *Low-skill labor-intensive*
The UN taxonomy assigns the classified portion of this chapter (SITC 897—jewelry and goldsmiths' wares) to the high-skill group (TDRE), yielding a mechanical result of medium/high-skill. However, 74 percent of the chapter's HS 6-digit lines correspond to raw or semi-processed precious stones and metals, which are unclassified. The manufactured portion—primarily jewelry fabrication—is a labor-intensive craft activity that is extensively carried out in developing countries using low-wage artisanal and workshop labor. The chapter is therefore assigned to the low-skill labor-intensive bucket.

Override 3: HS 86—Railway Rolling Stock
Final classification: *Medium/high-skill*
The UN taxonomy assigns railway locomotives, wagons, and rolling stock (SITC 791) to the low-skill technology/process-intensive group, yielding a mechanical result of low-skill tech-intensive. This assignment does not adequately reflect the production complexity of railway rolling stock, which involves significant structural engineering, embedded electronics, and precision fabrication. The chapter is reassigned to the medium/high-skill bucket.

Override 4: HS 89—Ships, Boats, and Floating Structures
Final classification: *Medium/high-skill*
The UN taxonomy assigns ships and boats (SITC 793) to the low-skill technology/process-intensive group, yielding a mechanical result of low-skill tech-intensive. Shipbuilding, however, involves substantial naval architecture, structural engineering, complex systems integration, and skilled fabrication. The chapter is reassigned to the medium/high-skill bucket.

Override 5: HS 95—Toys, Games, and Sports Equipment
Final classification: *Low-skill labor-intensive*
The UN taxonomy assigns toys and games (SITC 894) to the medium-skill group (TDRD), yielding a mechanical result of medium/high-skill. This classification likely reflects the design and brand value embedded in these products in advanced economy trade statistics, rather than the character of production. In practice, toy and game manufacturing—assembly of plastic and electronic components, stuffed toys, board games—is a paradigmatic labor-intensive activity, concentrated in low-wage developing-country export zones. The chapter is reassigned to the low-skill labor-intensive bucket.

Final Classification Table

The table below reports the final classification of all 69 HS 2-digit chapters in scope: **medium/high-skill**, **low-skill labor-intensive**, **low-skill technology/process-intensive**. The "Departure from UN classification" column indicates whether the final assignment differs from the mechanical UN-concordance result.

HS	Description	UN classification	Our classification	Departure from UN classification
28	Inorganic chemicals	medium/high-skill	medium/high-skill	No
29	Organic chemicals	medium/high-skill	medium/high-skill	No
30	Pharmaceutical products	medium/high-skill	medium/high-skill	No
31	Fertilizers	medium/high-skill	medium/high-skill	No
32	Dyes, paints, inks	medium/high-skill	medium/high-skill	No
33	Essential oils, cosmetics	medium/high-skill	medium/high-skill	No
34	Soaps, cleaning preparations	medium/high-skill	medium/high-skill	No
35	Starches, glues, enzymes	medium/high-skill	medium/high-skill	No
36	Explosives, matches	medium/high-skill	medium/high-skill	No
37	Photographic goods	medium/high-skill	medium/high-skill	No
38	Chemical products n.e.s.	medium/high-skill	medium/high-skill	No
39	Plastics	medium/high-skill	medium/high-skill	No
40	Rubber	medium/high-skill	medium/high-skill	No
41	Hides and leather	low-skill labor-intensive	low-skill labor-intensive	No
42	Leather articles, handbags	low-skill labor-intensive	low-skill labor-intensive	No
43	Furskins	low-skill labor-intensive	low-skill labor-intensive	No
44	Wood and wood articles	low-skill labor-intensive	low-skill labor-intensive	No
45	Cork	low-skill labor-intensive	low-skill labor-intensive	No
46	Basketware, plaiting	low-skill tech-intensive	low-skill tech-intensive	No
47	Wood pulp	unclassified	low-skill tech-intensive	**Yes**
48	Paper and paperboard	low-skill labor-intensive	low-skill labor-intensive	No
49	Printed books, newspapers	medium/high-skill	medium/high-skill	No
50	Silk	low-skill labor-intensive	low-skill labor-intensive	No
51	Wool, animal hair	low-skill labor-intensive	low-skill labor-intensive	No
52	Cotton	low-skill labor-intensive	low-skill labor-intensive	No
53	Vegetable textile fibers	low-skill labor-intensive	low-skill labor-intensive	No
54	Man-made filaments	low-skill labor-intensive	low-skill labor-intensive	No
55	Man-made staple fibers	low-skill labor-intensive	low-skill labor-intensive	No
56	Wadding, felt, ropes	low-skill labor-intensive	low-skill labor-intensive	No
57	Carpets	low-skill labor-intensive	low-skill labor-intensive	No
58	Special woven fabrics	low-skill labor-intensive	low-skill labor-intensive	No
59	Coated/industrial textiles	low-skill labor-intensive	low-skill labor-intensive	No
60	Knitted fabrics	low-skill labor-intensive	low-skill labor-intensive	No
61	Knitted apparel	low-skill labor-intensive	low-skill labor-intensive	No
62	Woven apparel	low-skill labor-intensive	low-skill labor-intensive	No
63	Made-up textiles, rags	low-skill labor-intensive	low-skill labor-intensive	No
64	Footwear	low-skill labor-intensive	low-skill labor-intensive	No
65	Headgear	low-skill labor-intensive	low-skill labor-intensive	No
66	Umbrellas, walking-sticks	low-skill tech-intensive	low-skill tech-intensive	No
67	Feathers, artificial flowers	low-skill tech-intensive	low-skill tech-intensive	No
68	Stone, plaster, cement articles	low-skill labor-intensive	low-skill labor-intensive	No
69	Ceramic products	low-skill labor-intensive	low-skill labor-intensive	No
70	Glass and glassware	low-skill labor-intensive	low-skill labor-intensive	No
71	Jewelry, precious stones	medium/high-skill	low-skill labor-intensive	**Yes**

HS	Description	UN classification	Our classification	Departure from UN classification
72	Iron and steel	low-skill tech-intensive	low-skill tech-intensive	No
73	Iron and steel articles	low-skill tech-intensive	low-skill tech-intensive	No
74	Copper	low-skill tech-intensive	low-skill tech-intensive	No
75	Nickel	low-skill tech-intensive	low-skill tech-intensive	No
76	Aluminum	low-skill tech-intensive	low-skill tech-intensive	No
78	Lead	low-skill tech-intensive	low-skill tech-intensive	No
79	Zinc	low-skill tech-intensive	low-skill tech-intensive	No
80	Tin	low-skill tech-intensive	low-skill tech-intensive	No
81	Other base metals	low-skill tech-intensive	low-skill tech-intensive	No
82	Tools, cutlery	low-skill tech-intensive	low-skill tech-intensive	No
83	Miscellaneous metal articles	low-skill tech-intensive	low-skill tech-intensive	No
84	Machinery	medium/high-skill	medium/high-skill	No
85	Electrical equipment, electronics	medium/high-skill	medium/high-skill	No
86	Railway rolling stock	low-skill tech-intensive	medium/high-skill	**Yes**
87	Vehicles	medium/high-skill	medium/high-skill	No
88	Aircraft, spacecraft	medium/high-skill	medium/high-skill	No
89	Ships, boats	low-skill tech-intensive	medium/high-skill	**Yes**
90	Optical/measuring instruments	medium/high-skill	medium/high-skill	No
91	Clocks and watches	medium/high-skill	medium/high-skill	No
92	Musical instruments	medium/high-skill	medium/high-skill	No
93	Arms and ammunition	medium/high-skill	medium/high-skill	No
94	Furniture, lighting	low-skill labor-intensive	low-skill labor-intensive	No
95	Toys, games, sports equipment	medium/high-skill	low-skill labor-intensive	**Yes**
96	Miscellaneous manufactures	low-skill tech-intensive	low-skill tech-intensive	No
97	Art, antiques	medium/high-skill	medium/high-skill	No

APPENDIX D Additional Figures

Figure D.1. China's global export market share by data source

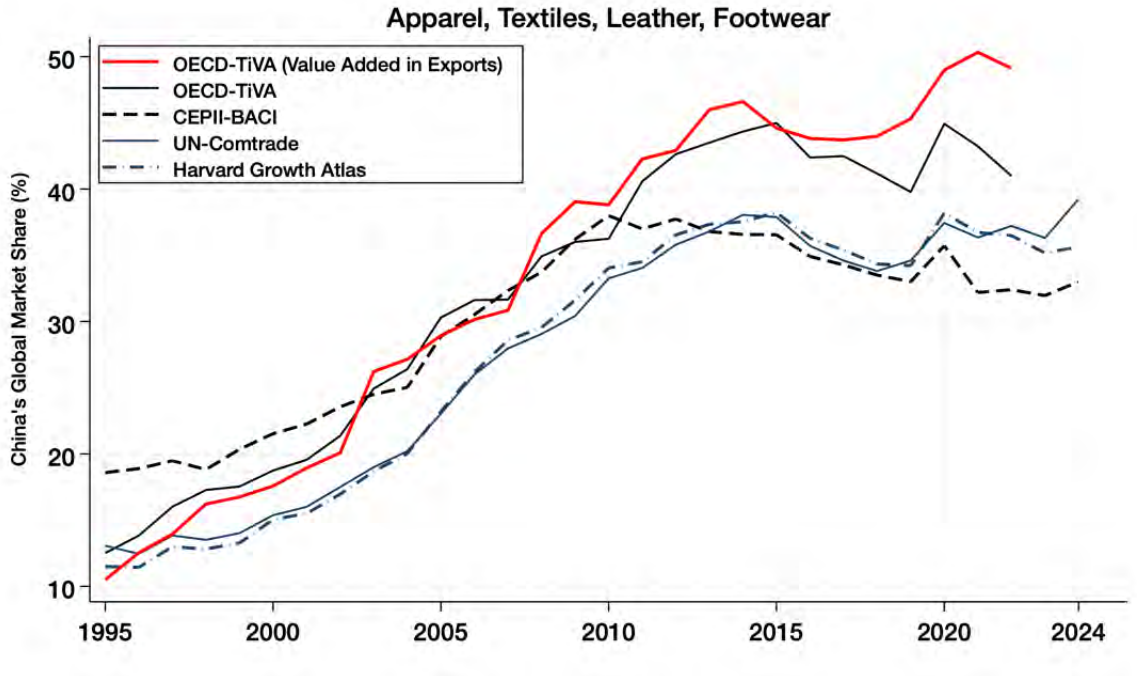


Figure D.2. China's "excess" exports in all low-skilled sectors, 1995-2022
(export share relative to working-age population share)

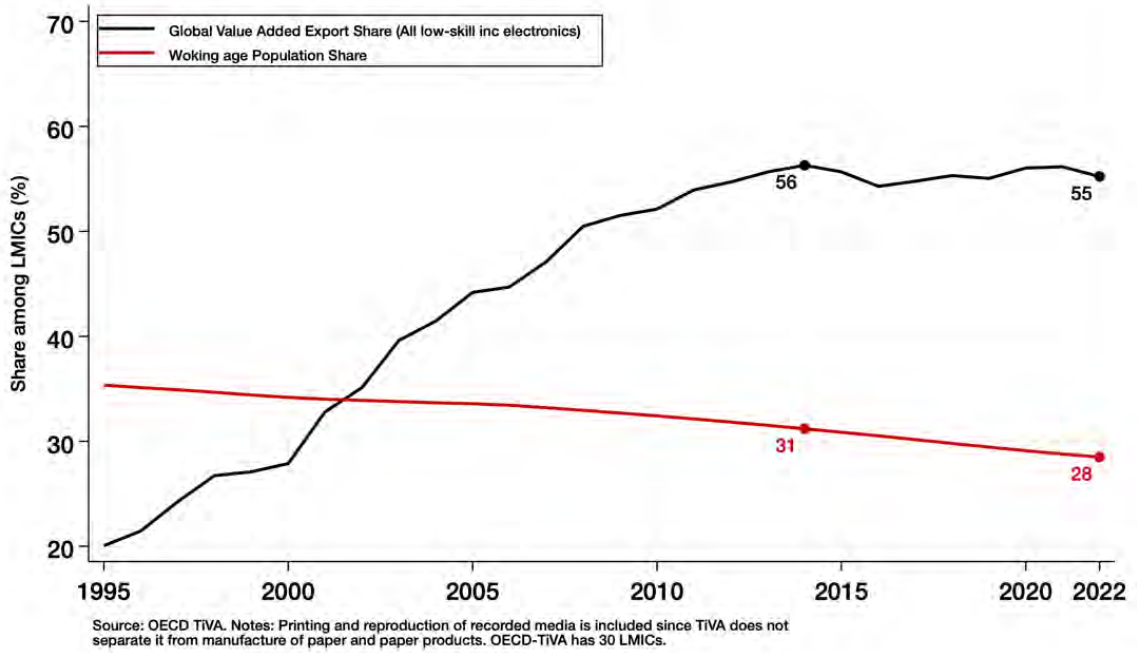
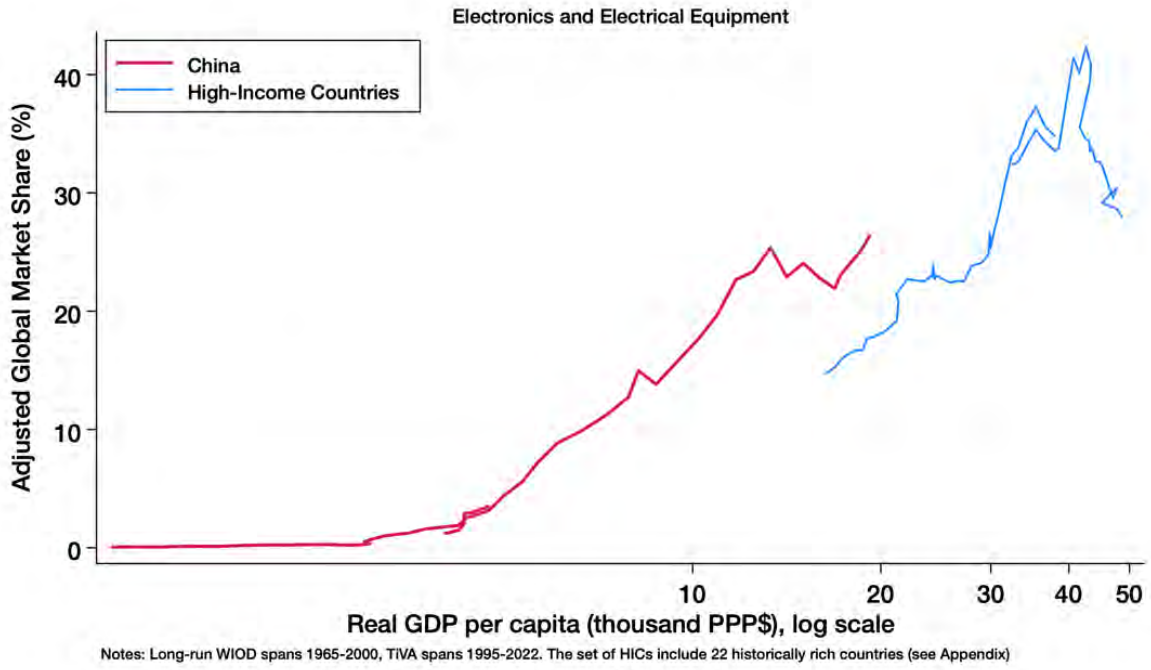
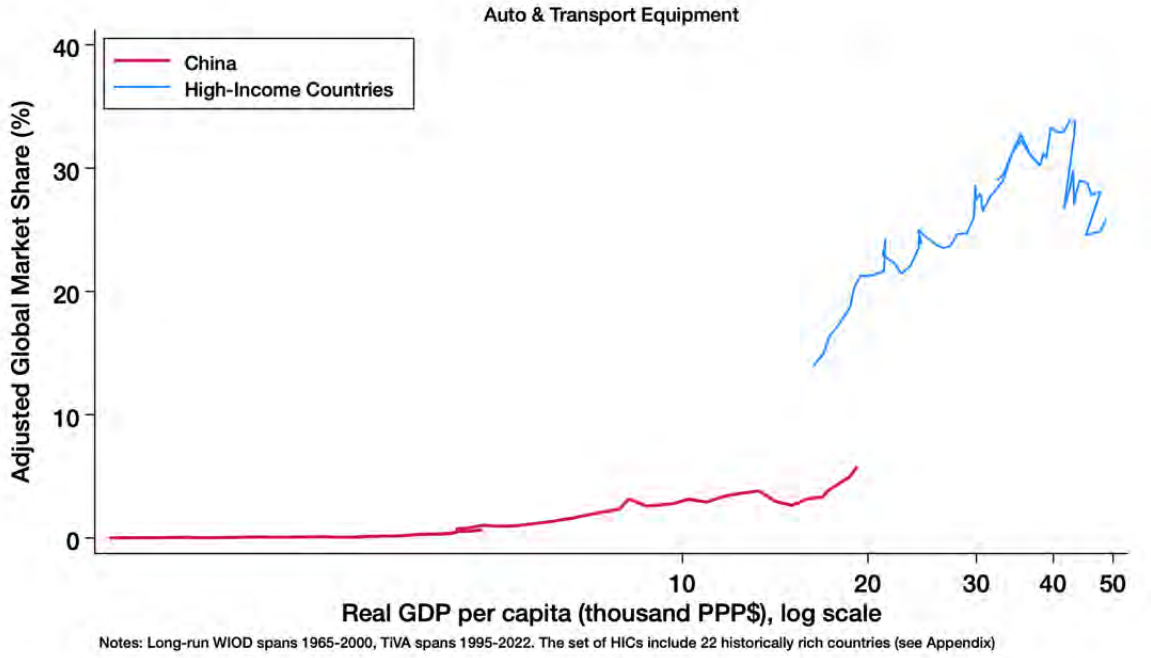


Figure D.3. Adjusted global export market share in development time in selected sectors, China and the West, 1965-2022





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