

# Globalization, Industrialization and Economic Catch-Up

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**Abstract:** *Industrialization was an essential path to modernization for early industrialized nations. Since the 1990s, however, premature deindustrialization has swept across much of the developing world, where industry contributed less to job creation and economic growth. Will developing countries still have opportunity to achieve economic growth and catch-up through industrialization? This article contends that the traditional path of industrialization has become more elusive in the era of globalization but the changing global economy and technological progress create new opportunities for developing countries. In today's interconnected world, China's economic rise has great implications for other developing countries. This article finds that China's emergence as the world's workshop has helped rather than hurt industrial development in Africa through two-way trade, but its impact may differ across the African continent, Africa's industrial path may not follow an export-oriented approach. Instead, Africa's future sustainability depends on its adoption of a diversified industrial policy.*

**Keywords:** *globalization, industrialization, economic development, industrial policy, Africa*

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## 1. Introduction

It is an important debate that under globalization, whether economic development leads to a “great divergence” or a “great convergence” among nations, and industrialization remains the core variable. Industrialization played a pivotal role in the modernization of early developed countries. The Industrial Revolution increased gaps between Western countries and the rest of the world. From 1820 to 1950, Latin American countries saw their per capita GDP fall from 3/5 the level of Western countries to 2/5, African countries from 1/3 to 1/7, and Asian countries from half to 1/10.

Since the 1950s, developing countries have striven to catch up with developed countries economically through industrialization. In the second half of the 20<sup>th</sup> century, a few emerging economies managed to successfully industrialize and close their gaps with developed countries, reversing the great divergence trend. Since the beginning of the 21<sup>st</sup> century, economic growth has gained momentum across the developing world. Yet the trend to deindustrialization has become evident as the industrial sector accounted for a smaller share of the economy and employment in developing countries. Reeling from financial crises, developed countries have seen their advantages over developing countries shrink. However, the great convergence is shrouded in doubt as developing countries move away from

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industrialization-led growth.

In contrast, China's industrialization has surged, contributing close to 1/4 of global industrial value-added. China's emergence as the world's workshop has mixed implications for other developing countries.

This article finds that since the 1950s, developing countries have undergone three stages of economic development. In the big-push industrialization stage of 1950-1980, developing countries slightly narrowed their gaps with leading developed countries. In the neoliberal globalization stage of 1980-2000, developing countries started to diverge, with a few emerging economies managing to narrow the gap, whereas most stagnated. Since the beginning of the 21<sup>st</sup> century, developing countries have once again narrowed their gaps with developed countries, but pressing issues of sustainable development remain.

In the context of globalization, the traditional path of industrialization becomes more perilous. Economic development must overcome the dilemma of creating jobs while innovating. In the developed world, innovation has led to a loss of manufacturing jobs. With their comparative advantage in labor-intensive manufacturing, developing countries have found it hard to advance technologically and create jobs while raising productivity through industrialization. This presents challenges and uncertainties to developing countries' endeavors to catch up with advanced economies. Globalization has led to the diversification of industrial paths for latecomer countries, and labor-intensive manufacturing is not the only choice. Resource-based industrialization and service-based manufacturing, for instance, may become new paradigms for many countries.

China's economic development has exerted various influences on industrialization of many developing countries. Although China's fast-growing manufacturing export sector creates competition, China's industrial transition also helps the global value chain be extended in more developing countries. China's vast market *also* brings opportunities to developing countries, especially mid- and low-income African countries.

## 2. Economic Catch-Up of Latecomer Countries

According to neoclassical economic theories, latecomer countries will experience faster growth in their labor productivity and output as technology and capital spread from advanced economies to latecomer countries, so that development gaps between countries become smaller, i.e. the "convergence" of development. After reviewing the history of economic growth in developed countries, Nicholas Kaldor presented three growth "laws" on (i) correlation between manufacturing output and economic growth; (ii) correlation between manufacturing output and labor productivity in manufacturing; (iii) correlation between manufacturing output and overall economic productivity. These laws suggest industrial growth contributes significantly to overall economic growth. For latecomer countries, increase in industry productivity is particularly important to achieve economic catch-up. Data suggest that from 1950 to 2006, the industrial sector contributed half of the improvement in labor productivity in the developing world.

Since the Industrial Revolution, global convergence has been the exception rather than the norm. Far from being a global phenomenon, economic catch-up has only occurred in a few latecomer countries with large and competitive workforces. Successful latecomer countries have achieved higher growth. In the 19<sup>th</sup> century, latecomer countries including the United States, Japan, Germany and Russia recorded annual per capita GDP growth rates of 1.4%-1.9%, which was twice as high as Britain's. After the 1950s, emerging economies experienced annual per capita GDP growth of 5%-9%, which was twice as high as in the United States. Since the 1950s, less than 10% of countries and economies have successfully crossed the high-income threshold from mid- and low-income levels. As can be found from the *Growth Report* released by the World Bank in 2008, only 13 countries managed to achieve an average economic

growth rate above 5% for 25 consecutive years from 1950 to 2005. Except for Brazil in Latin America, Botswana in Africa, Malta in Europe, and Oman in the Middle East, all are East Asian economies that achieved growth miracles.

This article focuses on the economic development of developing countries since 1950. With Angus Maddison's historical comparison data, we may divide seven-decade economic development into three stages: Stage 1 (1950-1980) was characterized by a government-led "big push" to industrialization. In this period, developing countries as a share of the global economy rose from 27% to 32%, and their population as a share of the world total climbed from 67% to 74%. Most developing countries saw their income gaps with developed countries narrow, or at least cease to widen. The per capita GDP of Africa, East Asia, Eastern Europe and Latin America as a percentage compared to the United States, all increased. However, in this period, China underperformed most other developing countries, with its per capita GDP declining from 5.8% to 5.3% of the level of the United States.

Stage 2 (1980-2000) featured the rise of neoliberal globalization as the government played a lesser role. In this period, developing and transition countries diverged. While the emerging economies in East Asia surpassed developed countries in per capita GDP growth, Africa and Latin America fell further behind. After the transition, countries in Eastern Europe experienced a sharp decline in their level of economic development, with per capita GDP down from close to half the level of the United States to 20%. After reform and opening-up in 1978, China's economy took off, but its GDP per head only reached 8.4% the level of the United States by the late 20<sup>th</sup> century, which was a bit higher than Africa's

**Table 1: Per Capita GDP of Developing Countries as a Percentage of the US Level from 1950 to 2016**

Stage	Period	China	Africa	East Asia	Latin America	Eastern Europe
"Big-Push" industrialization	1950-54	5.8%	10.1%	9.2%	19.2%	30.3%
	1955-59	6.1%	10.3%	9.4%	19.9%	35.3%
	1960-64	4.8%	10.4%	9.9%	20.2%	39.8%
	1965-69	5.0%	10.1%	9.4%	19.6%	41.9%
	1970-74	5.3%	12.5%	10.7%	22.5%	46.9%
	1975-79	5.3%	13.2%	11.2%	24.3%	49.1%
Neoliberal globalization	1980-84	6.1%	12.3%	11.0%	24.0%	48.9%
	1985-89	7.1%	9.6%	10.3%	20.1%	47.1%
	1990-94	7.4%	8.0%	12.2%	19.8%	36.6%
	1995-99	8.4%	6.9%	12.4%	20.5%	20.8%
Globalization of sustainable development	2000-04	10.2%	6.4%	11.8%	18.6%	20.8%
	2005-09	14.8%	7.5%	13.4%	21.9%	29.1%
	2010-16	21.6%	9.0%	16.5%	27.1%	36.2%

Source: Maddison Project Database, version 2018. Bolt, Jutta, Robert Inklaar, Herman de Jong and Jan Luiten van Zanden. 2018. "Rebasing 'Maddison': new income comparisons and the shape of long-run economic development."

Notes: Africa includes 52 countries; East Asia includes 21 countries (regions) other than China; Eastern Europe includes eight countries; Latin America includes 26 countries.

level.

Stage 3 (2000-present) featured the emergence of globalization of sustainable development. With the enactment of the United Nations Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs), development became a hallmark of globalization. In the developing world, economic growth gained momentum. After the global financial crisis in 2008, growth in the developed world stalled, and per capita GDP gaps between developing countries and the United States narrowed. Among developing countries, China moved ahead the most with per capita GDP exceeding 20% the level of the United States by 2016.

While Asian, African and Latin American countries all narrowed their gaps with leading developed countries, their growth drivers and patterns were different. Economic growth in Latin America and Africa was primarily driven by labor migration from agriculture to industrial sectors while industrial productivity remained stagnant. In Africa, industrial productivity declined, triggering concerns over the continent's growth sustainability. In contrast, China and other East Asian economies derived economic growth from both labor migration and improving industrial productivity. In other words, manufacturing growth and efficiency improvement served as twin engines of East Asia's economic growth while Africa and Latin America relied on external demand as the sole driver of growth.

### **3. Globalization and Deindustrialization**

Since the 1950s, the divergence between developed and developing countries has ceased to widen. A few emerging economies have even narrowed their gaps with developed countries. However, the much-anticipated great convergence and common prosperity did not occur on a global scale. For most countries, industrialization failed to spur economic development. Instead, deindustrialization became a common problem.

#### **3.1 Deindustrialization in Developed Countries**

Developed countries have followed similar paths of economic development, as reflected in the transition from agriculture to industry and then to the service sector. Deindustrialization, a natural result when economic development enters a mature stage, is measured by two primary indicators: first, the share of the workforce employed in the manufacturing sector; second, manufacturing value-added as a share of the total economic output. From 1970 to 2007, the manufacturing workforce as a share of total employment in the 15 EU member states dropped from 28.2% to 15.6%, and manufacturing value-added as a share of the GDP fell from 26.6% to 18.1%. US manufacturing jobs as a share of the total workforce declined from 22.4% to 8.9%, and manufacturing value-added as a share of the aggregate economic output shrank from 23.5% to 13.1%. In 1950, manufacturing output as a share of the total output (31%) in developed countries was nearly three times the level of developing countries (11%). However, by 2005, the manufacturing sector accounted for a larger share in developing economies than in developed ones.

Deindustrialization in developed countries is generally believed to be driven by rising productivity, changing consumption demand, and economic globalization. Technological progress has increased productivity and allowed workers to be replaced with machines. With rising living standards, consumers spend a larger share of their incomes on high-end industrial goods and services and a smaller share on daily necessities. Hence, manufacturing value-added as a share of the economic total remains constant despite a shrinking manufacturing workforce. Such a form of deindustrialization is a manifestation of more knowledge-based manufacturing in the post-industrial era.

Due to its effects on technological progress and demand shift, globalization plays an important role in deindustrialization. As a result of outsourcing, manufacturing industries have hollowed out in some countries. A country's position in the global division of labor will also influence its industrial

structure: While developed countries are specialized in technology and capital-intensive manufacturing, developing countries have a comparative advantage in labor-intensive manufacturing, and are competing with manufacturing industries in developed countries through labor-intensive exports, precipitating the trend towards deindustrialization.

Deindustrialization is inevitable for developed countries. Yet it has created intractable social and economic problems. As manufacturing jobs diminished, the working class below the median income level felt the financial burden the most, becoming the biggest losers in the golden age of globalization (1988-2008). As social welfare systems become less sustainable, trade protectionism and populism are on the rise in the developed world and present major barriers to globalization.

### 3.2 Deindustrialization in Developing Countries

Many developing countries have also experienced deindustrialization. Since the 1990s, most developing countries have been striving to industrialize, but the trend towards deindustrialization has occurred prematurely. Both manufacturing value-added as a share in the economy and the manufacturing workforce as a share of total employment have declined after peaking at levels significantly below those attained by developed countries. In the UK and Germany, the manufacturing workforce as a share of the employed population peaked at above 30%. In the 1980s, the manufacturing output value of developing countries as a share of the GDP peaked at 20%. Since the beginning of the 21<sup>st</sup> century, the trend toward deindustrialization has become more prominent, with manufacturing output value peaking at a mere 14% of the GDP. The deindustrialization trend occurred not only in middle-income Latin American countries, but also in low-income African countries.

Why did “premature deindustrialization” occur in developing countries before they fully industrialize? Dani Rodrik believed that the answer lay in technological progress, demand shift, and increasing competition. Automation replaced manual labor and caused wage levels to fall. Services displaced industrial goods as a share of consumer demand. Premature deindustrialization in developing countries is often accompanied by “premature urbanization.” When African countries reached 50% urbanization, their per capita income could be only half the level of Latin American countries and one third the level of East Asian economies. The reason is that instead of entering the more productive manufacturing sector, surplus labor from agriculture ended up in less productive urban services.

Another facet of premature deindustrialization is premature specialization. Traditionally, a country’s economic structure is in an inverted U-shaped relationship with economic growth. In the initial stage, a country’s economy is dominated by agriculture. When the economy takes off, the country’s workforce migrates to increasingly diversified industrial and service sectors. As the economy enters the mature stage, sectors with comparative advantages will make up a lion’s share of industrial production. Once again, the country’s economic structure becomes less diverse. In the globalization era, developing countries find it easier to integrate into the international market. When participating in the global division of labor, developing countries still at a low level of development tend to specialize in a few products at the expense of economic diversification.

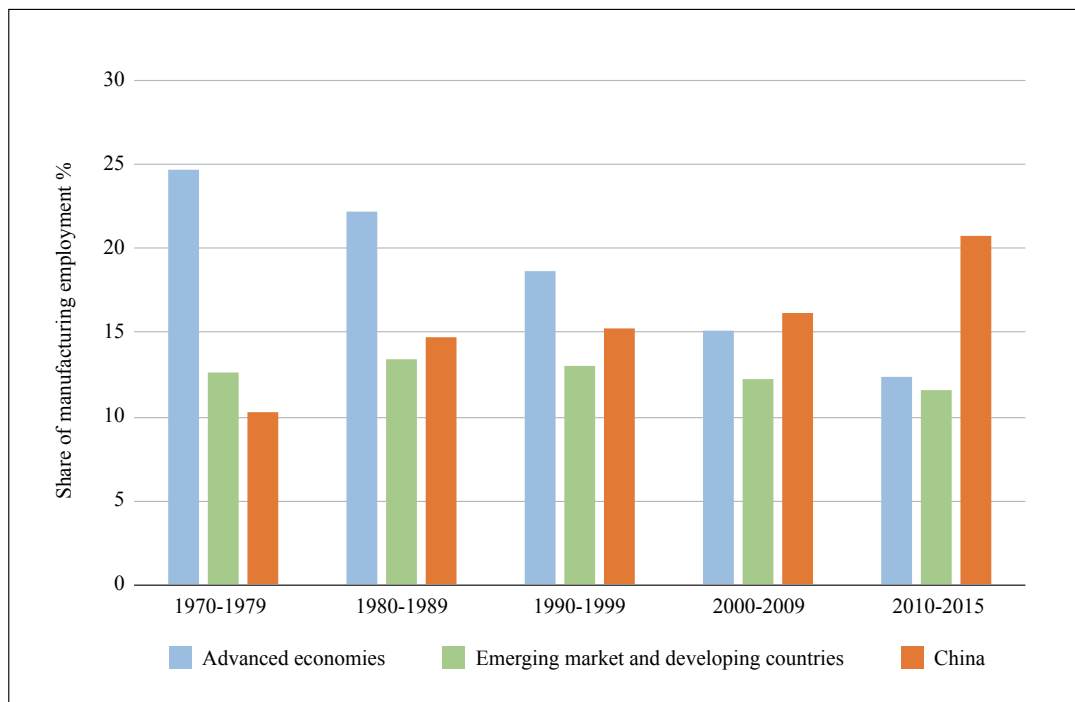
Policy choice is another important factor leading deindustrialization in developing countries. According to Howard Stein, neoliberal structural adjustment played a key role in the deindustrialization of African countries. To escape their debt crisis of the late 1970s, African countries accepted 31 projects of structural adjustment loans (SALs) from the World Bank, equal to half the World Bank’s total loans during 1980-1990. To acquire these loans, African countries were required to open their markets and reduce government policy guidance on industrial investments, among other conditions. After abandoning government-led industrialization, the African countries were unable to establish a market-based development model.

After the turn of the 21<sup>st</sup> century, most African countries reformulated their industrial policy in another attempt to industrialize. This resulted in a rising share of the industrial workforce in total

employment and higher labor productivity amid economic restructuring. However, industrial labor productivity did not improve much. Africa's economic growth came from a big increase in exports. From 1995 to 2008, Africa's total exports grew almost six-fold. Primary products and energy exports as a share of total exports rose from 88% to 93%, while the manufacturing sector as a share of exports decreased from 12% to 7%. Economic growth in African countries was primarily driven by high international oil prices and robust demand for commodities rather than the manufacturing growth. Hence, concern arises about whether Africa's economic growth is sustainable and the continent will fall victim to a "resource curse."<sup>1</sup>

Similarly, international oil and agricultural price hikes boosted economic growth in Latin American countries. From 2000 to 2015, annual economic growth in Latin American countries averaged 3% - still below the levels of Asia and Africa but higher than in the late 20<sup>th</sup> century (from 1980 to 2000, Latin American economies grew at a mere 0.4% annually). Like African countries, Latin American countries were heavily dependent on energy and primary exports. Since the dawn of the 21<sup>st</sup> century, the rising share of primary products in Latin American exports has become a cause for concern.

In contrast to the deindustrialization trend in most developing countries, China's industrial development has gained momentum. From 1990 to 2018, China's industrial value-added increased by 18 times, and its share in global manufacturing value-added jumped from 4% to 21%.<sup>2</sup> Meanwhile, China swiftly narrowed its gaps with developed countries. China's per capita GDP as a percentage of the US level surged from 5.7% in 1980 to 23.2% in 2016. Industrialization has played a pivotal role in China's



**Figure 1: Global Manufacturing Workforce as a Share of Total Employment**

Source: IMF. 2018. "World Economic Outlook: Cyclical Upswing, Structural Change", April 2018, p. 130.

<sup>1</sup> For explanations and empirical analysis on resource curse, see Sachs, Jeffrey and A. M. Warner. 2001. "The Curse of Natural Resources," *European Economic Review*, 45: 827-838.

<sup>2</sup> Calculated based on the World Bank's World Development Index (WDI) database.

economic catch-up.

China's industrial development has also contributed to a rise in global manufacturing productivity. From 1970 to 1990, growth in global manufacturing labor productivity was outpaced by growth in global overall labor productivity. In 1990-2010, global manufacturing labor productivity increased at more than twice the speed of the previous stage and was 12 percentage points higher than the growth in overall labor productivity in the same period. This period also coincided with a sharp increase in China's manufacturing growth.

Figure 1 shows that from 1970 to 2015, the manufacturing workforce as a share of total employment in developed countries fell from 24.6% to 12.4%, and the labor-intensive manufacturing sector fell the most. After peaking at 13.4% in the 1980s, manufacturing employment in developing countries slowly decreased to 11.6%. In the same period, China's manufacturing workforce as a share of total employment more than doubled, from 10.3% in 1970 to 20.8% in 2015. Amid a global manufacturing downturn, China's industrial development has offset the impact of industrial decline in other countries and contributed to the maintenance of the manufacturing sector's share in the global economy.

#### 4. China's Role in Africa's Industrialization

China's rapid industrial growth stands in sharp contrast to deindustrialization in many other developing countries. One may wonder whether the two opposing tracks of development are in any way related to each other. Without a doubt, China's industrialization benefited from an abundance of the low-cost workforce. However, countries with a similar natural endowment were not equally as successful in their industrial development. India is a typical example.

Globally, China's emergence as the world's workshop reflects global manufacturing restructuring. The extension of the global value chain has transformed traditional manufacturing. While countries at the upstream and downstream of the value chain deindustrialize, those at the midstream have expanded their industrial capacity. Specifically, deindustrialization in developed countries is shown in the concentration of industrial activity at the knowledge-intensive upstream of the value chain. In African and Latin American countries, deindustrialization is indicated in an increasing share of raw materials and primary products in total industrial output. The gravity of mid-end labor-intensive industrial activity has shifted to emerging East Asian economies, including China. In other words, globalization has strengthened China's economies of scale in labor-intensive industries, developed countries' advantage of knowledge in high-end services, and other developing countries' advantage in the supply of primary products.

How has China's industrial development influenced developed countries? Some scholars argue that China's manufacturing exports has "crowded out" the local manufacturing industry. The loss of competitiveness and jobs swayed the domestic political agendas of importing countries. "China shock" becomes more evident in developed countries. Some American scholars have blamed Chinese exports for the loss of US manufacturing jobs and falling wages. Hence, regions experiencing a faster growth of imports from China are more likely to show signs of political polarization. In Europe, regions heavily affected by Chinese competition have seen a sharper rise in nationalism and right-wing political parties. Yet some studies have found that the negative impact from Chinese exports has been exaggerated: Less costly intermediate goods imported from China have lowered input cost for downstream industries and thus indirectly created more non-manufacturing jobs.

Considering the coexistence of competition and complementarity between China and other developing countries, it is difficult to assess how China's industrial development has influenced other developing countries. On the one hand, as the world's largest manufacturing and exporting nation, China may have placed competitive pressures on importing countries for labor-intensive industries, especially in countries whose level of development and economic structure are close to those of China. On the other hand, China's industrial transition is likely to extend the global value chain to more developing

**Table 2: China's Possible Impacts on the Industrial Development of Other Developing Countries**

	Competition	Complementarity
Domestic	Domestic industrial capacity declines	Domestic industrial capacity increases by serving as a destination for industrial relocation from China
International	Crowding-out effect on the international market share	International market share expands as a result of integration into the global value chain

Source: Compiled by authors.

countries. China's growing consumption power will strengthen its core position in the global value chain with positive spillovers on upstream and downstream countries. Whether there is more competition or complementarity depends on the trading nation's level of development and economic structure.

In this article, we chose African countries whose levels of development are far below China's as the subjects of analysis. Table 2 presents four possible scenarios in which China may influence industrial development in African countries. If competitive relationship dominates, Chinese exports to Africa would crowd out African firms, whose domestic market share becomes smaller. Also, Chinese products may eat into the international market shares of export-oriented African firms, whose industrial exports may suffer. Both circumstances would cause a decline in the industrial activity of importing countries. If complementary relationship dominates, China-Africa trade is likely to spur an increase in the industrial capacity of the African countries, which will export more industrial goods to China. Meanwhile, African producers will participate more in the global value chain and export more finished industrial goods and intermediate goods to other countries. In both circumstances, the level of industrial development will rise in the African countries.

Since the turn of the century, China's trade with Africa has grown extensively. For the past ten years, China has been Africa's largest trading partner. Meanwhile, developed countries from Europe and North America, which used to be Africa's biggest trading partners, have seen their share in Africa's total trade volume shrink from 62% to 44%.<sup>3</sup>

Primary products account for 77% of African exports to China, while 92% of Africa's imports from China are manufactured goods. Despite Africa's rising trade deficit with China, African exports to China grew by 15.4% annually, outpacing the 8.5% average growth of exports between African countries and far higher than African exports to developed countries in Europe and North America. From 2000 to 2017, China's share in African exports rose from 2% to 8.7%; Europe's share fell from 36% to 30%; the US' share dived from 21% to 7%. As far as manufacturing goods, intermediate products and raw materials are concerned, African exports to China have been growing at a much faster pace than its exports to its other major trading partners. African exports of raw materials and primary products to the US have decreased due to falling demand, whereas African exports to Europe grew by close to 5% on an annual average basis (see Table 3).

African exports of intermediate products increased the fastest at 8.9% on an annual average basis, or more than twice the export growth of raw materials. Compared with exports of industrial finished goods and raw materials, African exports of intermediate products have increased at a faster pace with all major trading partners. This implies that African countries have become more integrated into the global value chain, and that China and Africa are highly complementary with each other for industrial development. African manufacturing exports to China still account for a small share of China-Africa trade but are

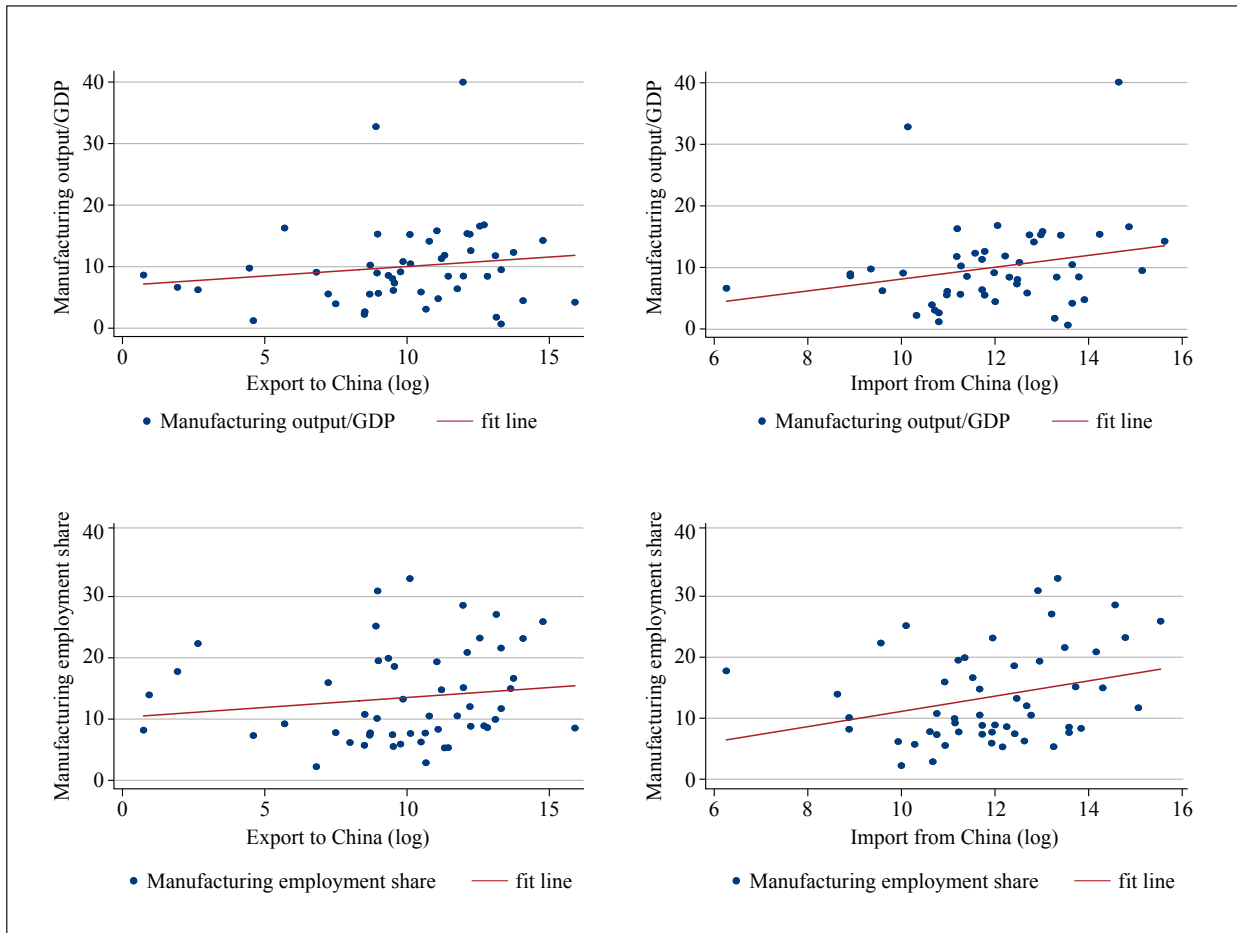
<sup>3</sup> UNCTAD. 2019. "Key Statistics and Trends in Regional Trade in Africa," 17. [https://unctad.org/en/PublicationsLibrary/ditctab2019d3\\_en.pdf](https://unctad.org/en/PublicationsLibrary/ditctab2019d3_en.pdf).



**Table 3: Composition of African Exports to Major Trading Partners (2000-2017)**

Trading partner	Total export growth (annual average)	Manufacturing export growth (annual average)	Intermediate goods export growth (annual average)	Raw materials export growth (annual average)	Share in total exports (2000)	Share in total exports (2017)
World	5.7%	6.0%	8.9%	4.2%	100%	100%
China	15.4%	13.2%	19.3%	19.2%	2.0%	8.7%
Africa	8.5%	9.7%	8.6%	7.5%	35.9%	30.2%
Europe and Central Asia	4.7%	2.6%	7.0%	3.0%	16.0%	22.1%
United States	-0.8%	3.0%	6.9%	-4.0%	20.9%	7.0%

Source: The World Bank's World Integrated Trade Solutions (WITS) database, <https://wits.worldbank.org/Default.aspx?lang=en>.



**Figure 2: Relationship between African Countries' Manufacturing Development and Trade with China (2000-2018)**

Source: The World Bank's World Integrated Trade Solutions (WITS) database, <https://wits.worldbank.org/Default.aspx?lang=en>.

growing at a much higher pace compared with African exports to other major trading partners.

Figure 2 shows the relationship between manufacturing development in African countries and China-Africa trade since the beginning of the 21<sup>st</sup> century. In the figure, the horizontal axis denotes the mean values of African exports to China and imports from China (natural logarithms), and the vertical axis denotes the share of Africa's manufacturing employment and manufacturing value-added in the economy. Both the shares of manufacturing employment and value-added are positively correlated with trade with China. More importantly, the positive correlation between these indicators with imports from China is more significant than the correlation with exports to China. This finding suggests that instead of causing deindustrialization in Africa, Chinese imports have had a positive effect on Africa's industrial development. The extent to which Chinese imports influenced Africa's industrial development is to be uncovered by further empirical analysis.

As can be seen from the above figures, China and Africa have been highly complementary with each other for industrial development since the beginning of the 21<sup>st</sup> century. While China's import demand has spurred Africa's manufacturing exports, China's commodity and capital exports have helped African countries expand their industrial capacity and further integrate into the global value chain. The industrial structure and development stages of most African countries are very different from China's and are likely to benefit financially from industrial capacity cooperation. According to Justin Yifu Lin *et al.*, China's transition from labor-intensive industries to capital- and technology-intensive industries will create opportunities for industrial development in low-income developing countries. They estimated that a 10% reduction in China's manufacturing jobs as a result of industrial transition would cause 8.5 million jobs to be transferred to low-income developing countries, including those in Africa, and help host countries industrialize.

Of course, the competitive and complementary relationship with China varies considerably across African countries with different natural endowments and development levels. With a low level of economic development, since the beginning of the 21<sup>st</sup> century, Ethiopia has experienced the fastest growth of economic and trade cooperation with China among African countries. By serving as a destination for industrial relocation from China and developing labor-intensive industries, Ethiopia has become one of the fastest-growing developing countries.<sup>4</sup> With a higher economic development level, South Africa saw a much slower growth rate of imports from China compared with Ethiopia but has a similar industrial structure with China's, which means more competition from China; deindustrialization is more evident in South Africa.

## 5. Conclusions

China's economic development and Africa's rise in the 21<sup>st</sup> century suggest that traditional economic development theories no longer reflect the profound changes in the world economy and offer little guidance for latecomer countries over their strategic choices. Since the late 20<sup>th</sup> century, very few countries have managed to economically catch up with developed countries by embarking on an industrialization path. For latecomer countries, industrialization is not the only way to achieve economic catch-up. What matters is the choice of a suitable strategy for industrialization. In the era of globalization, the gaps between the South and North have narrowed, but disparities among developing countries have widened, both in terms of their economic growth rates and development models. Existing development experiences - whether from Western developed countries or emerging economies - cannot serve as standard models applicable to latecomer countries. Developing countries should formulate their industrial policy according to domestic endowments and the international environment for sustained

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<sup>4</sup> African Development Bank Group. 2017. *Industrialize Africa: Strategies, Policies, Institutions, and Financing*. [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/industrialize\\_africa\\_report-strategies\\_policies\\_institutions\\_and\\_financing.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/industrialize_africa_report-strategies_policies_institutions_and_financing.pdf).

economic growth.

Since the 1990s, China's rapid industrialization has stood in sharp contrast to deindustrialization in many other developing countries. While some studies have argued that China's status of world workshop has limited opportunities for other developing countries to industrialize, this article suggests that China's economic development is not a contributor to deindustrialization in other developing countries. China's manufacturing exports have created a competition to some importing countries, but China's manufacturing transition also creates opportunities for developing countries to receive industrial relocation from China and expand exports to the global market. The international supply chain led by China will create spillover effects for upstream and downstream industries, allowing developing countries to participate in the global value chain. Since most African countries have development levels and economic structure different from China's, their industrialization has generally benefited from China-Africa trade growth.

Globalization's effects on industrial growth vary across developing countries, giving rise to diverse paths of industrialization. Such diversity is manifested not only between developing countries with different economic development levels but also within the same region. As the manufacturing sector creates fewer jobs and contributes less to improvement in labor productivity, traditional labor-intensive and export-oriented manufacturing is no longer the only option for latecomer countries to achieve industrialization. In Africa, some countries have made remarkable progress in industrialization by improving the investment climate and infrastructure to integrate into the global value chain and play host to industrial relocation from China based on their comparative advantages. Meanwhile, some African countries have set as their goal to develop manufacturing-based services and manufacturing based on primary products.

Our findings provide new implications for China's development of sustainable economic and trade relations with other developing countries. In the context of intensifying great-power competition, it becomes more relevant for China to maintain good relations with other developing countries. In the international market, China competes and cooperates with other developing countries. For countries with a development level and economic structure similar to China's, competition is likely to dominate. Trade imbalances may also elicit more protectionism and even fuel nationalistic sentiments. To regulate the competition-complementarity relationship with other developing countries, China should open its domestic market wider and selectively carry out international industrial capacity cooperation.

Economic disparities offer great potentials for cooperation between China and Africa. The China-Africa relationship is at a critical juncture of dual transition: While China is pursuing industry upgrade and transition, Africa needs to receive surplus industrial capacity from China to stimulate industrial growth. To tap into the vast potentials for industrial capacity cooperation, China and Africa should coordinate at the macro level and mitigate the impact of Chinese capital and goods exports that may create socioeconomic disruptions in Africa. As Africa's most important trading partner, China may serve as a key external force for Africa's regional integration through the overseas extension of the manufacturing value chain. Africa's regional integration will also provide a broader platform for deepening China-Africa economic and trade cooperation. Pursuing multiple paths to industrialization underpins sustainable development in African countries, but also forms the basis for creating a stable international economic order. ■

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