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**Economic Transformation and
a New Economic Order*****Lili Yan ING***ERIA (Economic Research Institute for ASEAN and East Asia)***Justin Yifu LIN***Peking University*

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Abstract: *World economic governance was largely dominated by major developed countries in the 20th century. Over the last half-century, we have witnessed a global economic transformation. The shift is evident in the changing global shares amongst developed and developing countries across four key economic metrics: total output, trade in goods, manufacturing value added, and foreign direct investment. What we find is that the substantial transformations are not primarily caused by significant changes in the growth performance of developed countries but rather by the rapid catch-up of a few developing countries. Sustainable economic growth is a continuous process of technological innovation, elevating labour productivity, and industrial upgrading. Drawing on insights from the growth and structural transformation patterns observed in both developed and developing countries, achieving sustainable economic growth requires (i) optimising comparative advantage and effective infrastructure, (ii) managing gradual transitions economically and politically, and (iii) optimising the use of digital transformation.*

Keywords: Economic transformation, international trade, investment, world economy

JEL classification: F1, O, N, P

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1. Introduction

World economic governance was largely dominated by major developed countries in the 20th century, with their economic power contributing to about half of the global economy. According to Maddison's historical data, the share of the seven industrialised advanced countries – the United States (US), the United Kingdom (UK), Germany, France, Italy, Canada, and Japan – in world gross domestic product (GDP), measured in terms of purchasing power parity, was 45.9% in 1900, 50.9% in 1950, and 44.9% in 2000 (Maddison, 2010). Due to their economic strength, these countries formed the Group of Seven (G7), which provided the most influential economic governance in the world in the latter half of the 20th century.

Entering the 21st century, the world economic landscape changed dramatically. The G7's economic weight in the world economy dropped to 36.1% in 2010 and 30.8% in 2020. As a result of this significant change in the world economic landscape, the G7 was replaced by the G20 in 2008, during the global financial crisis, as the leading global economic governance entity. In this paper, we present the changing global economic order, analyse the causes of the change, and provide some lessons from the change. The organisation of the paper is as follows: Section 2 depicts the changing landscape across various metrics amongst developed and developing countries. Section 3 explores the determinants of the economic structure and the causes of ongoing structural transformations. Section 4 offers conclusions and draws policy recommendations, especially for the challenges and opportunities for structural transformation in individual countries and the global economy arising from digitalisation – wide-ranging technological innovation known as the Fourth Industrial Revolution.

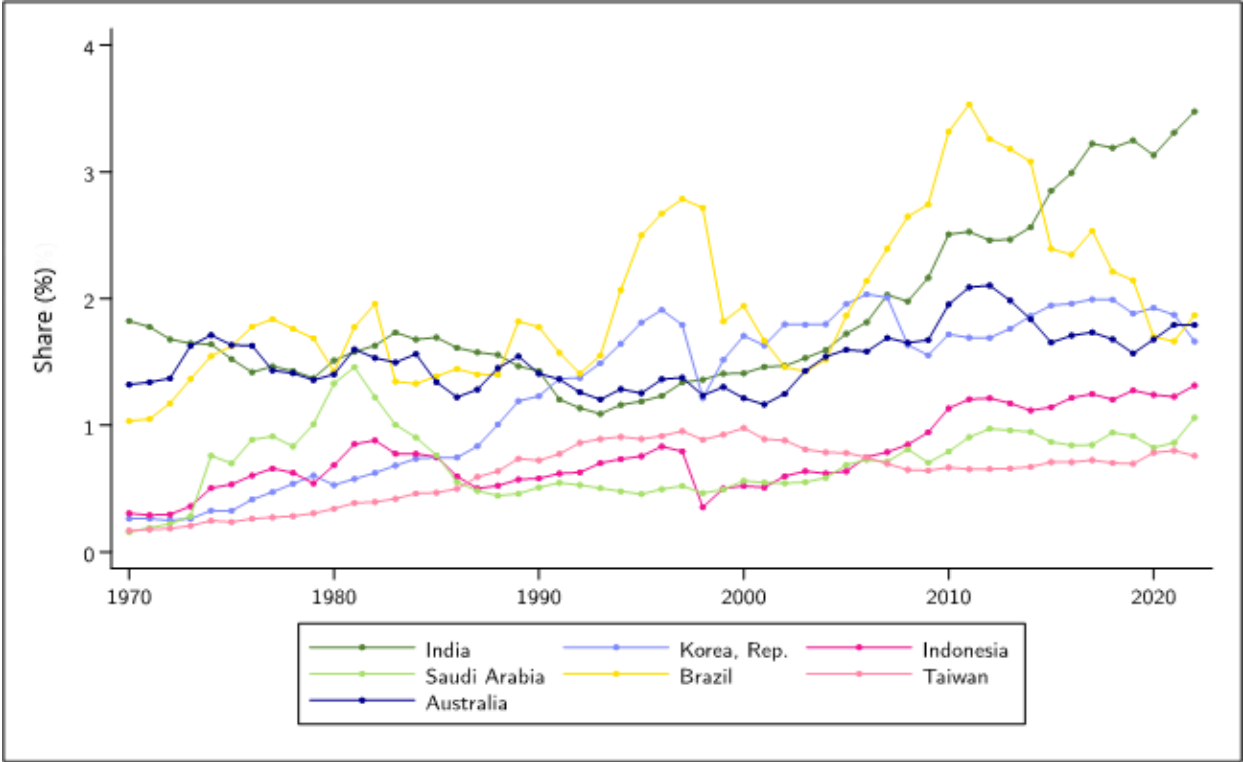
2. Economic Shifts

Over the last half-century, we have witnessed global economic transformation. A few countries that held predominant influence in the world's economic landscape during the early 1970s have gradually relinquished their positions to emerging economies. These emerging economies have increased their shares in the world economy, both in significance and pace. The shift is evident in the changing global shares amongst developed and developing countries across four key economic metrics: total output, trade in goods, manufacturing value added, and foreign direct investment (FDI).

Economic output

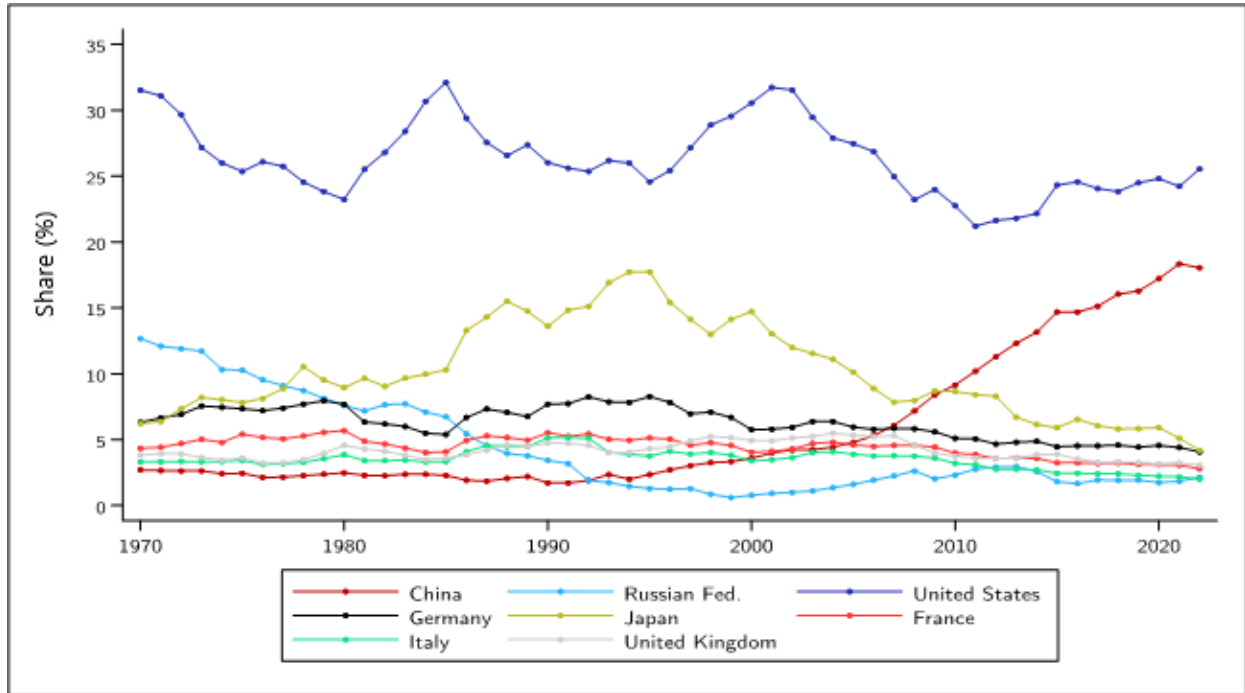
In terms of GDP worldwide from 1970 to 2022, a noteworthy observation is the decline in the contribution of developed countries, represented by G7 members, to global GDP. This contribution decreased from 58.1% in 1970 to 43.8% by 2022. China, on the other hand, managed to increase its share in global GDP from 2.7% in 1970 to 3.6% in 2000 and an impressive 18% by 2022. Beyond China, the data indicate a heightened contribution from the Asia-Pacific region to global GDP, marked by the growth of the Republic of Korea (henceforth, Korea), India, and Southeast Asia (also known as the Association of Southeast Asian Nations (ASEAN)), collectively increasing from 3.2% in 1970 to 8.7% by 2022 (Figures 1a and 1b). In contrast, Eastern Europe and Central Asia have experienced the most substantial decline in global GDP share, dropping from 15.3% in 1970 to 5.0% by 2022, coinciding with the decline and eventual collapse of the Soviet Union. Meanwhile, regions such as Latin America and the Caribbean, Sub-Saharan Africa, and the Middle East and North Africa have shown no significant growth in global GDP share over the past five decades (UNCTAD Stat, 2022).

Figure 1a: Share (%) in World GDP, 1970–2022 – Top Seven Gainers, excluding China



GDP = gross domestic product.
 Source: Authors’ calculation from UNCTAD Stat (accessed December 2022).

Figure 1b: Share (%) in World GDP, 1970–2022 – Top Seven Decliners, except China



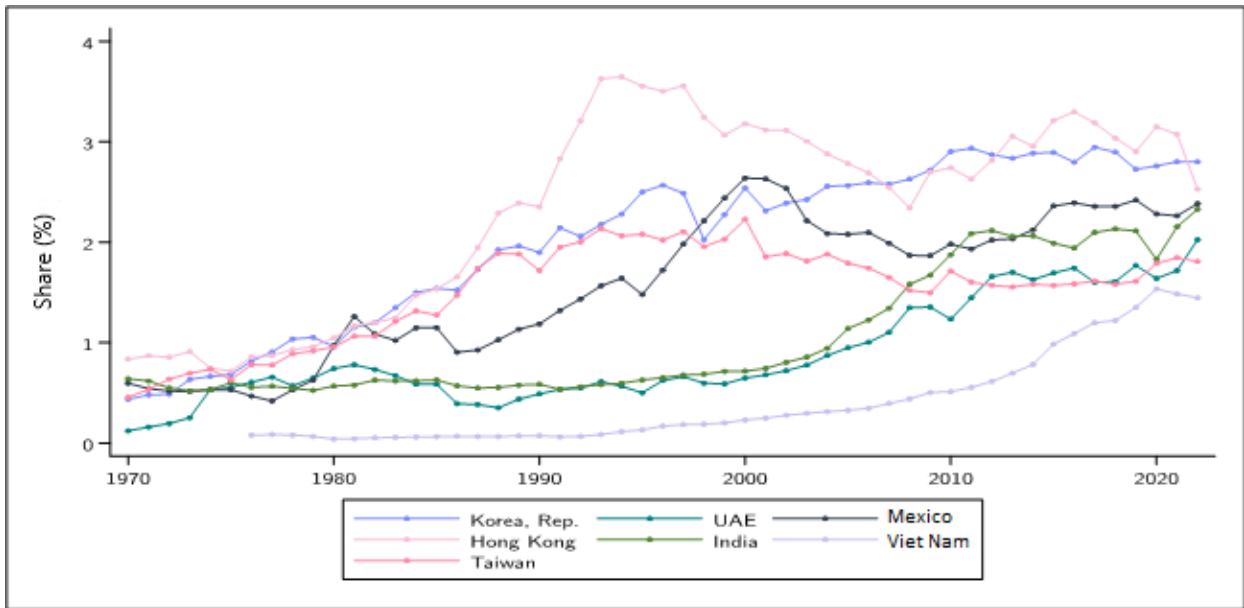
GDP = gross domestic product.

Source: Authors' calculation from UNCTAD Stat (accessed December 2022).

Trade in goods

Turning to trade, it mirrors the GDP figures, revealing a sharp decline in the share of developed economies in global trade in goods – from 81.6% in 1970 to 57.1% by 2022. China's exponential growth in global trade has directly counteracted the lost shares from developed economies. This decline has been particularly pronounced since 2000, coinciding with China's significant ascent, notably since its accession to the World Trade Organization (WTO). The contribution of high-income developing economies to world trade in goods has almost tripled, rising from 11.5% in 1970 to 33.4% by 2022. This group of countries appears to be where the bulk of the growth in trade activities has taken place over the past half-century (Figures 2a and 2b). The top gainers are primarily composed of higher-income developing economies, including Korea, the United Arab Emirates, Mexico, Hong Kong, India, Viet Nam, and Taiwan.

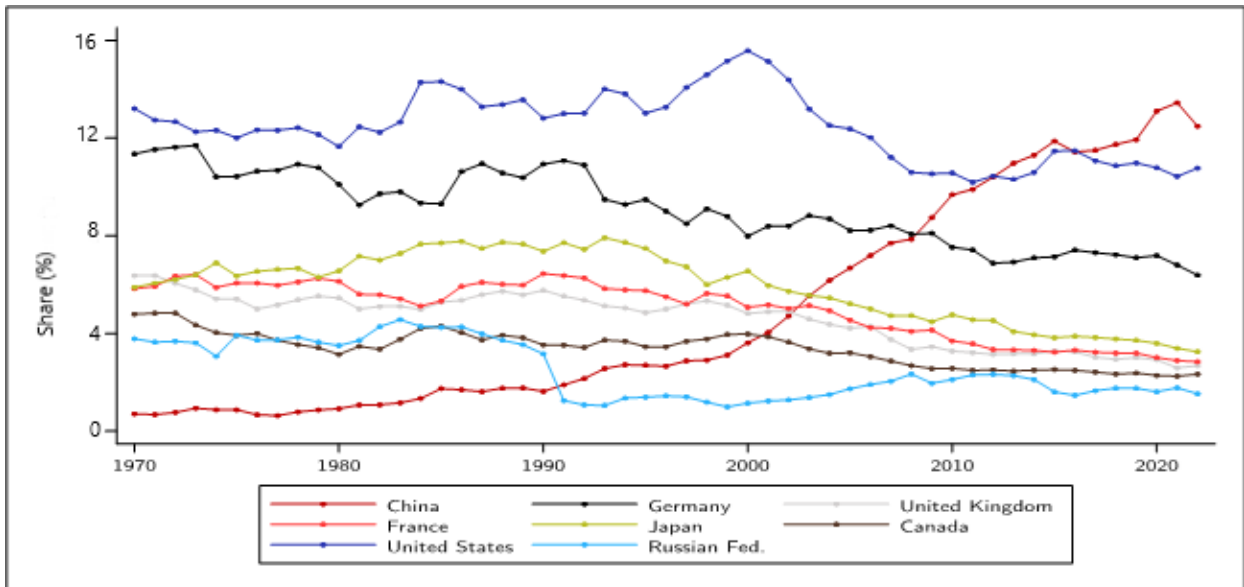
Figure 2a: Share (%) in World Trade in Goods, 1970–2022
Top Seven Gainers, excluding China



UAE = United Arab Emirates.

Source: Authors' calculation from UNCTAD Stat (accessed December 2022).

Figure 2b: Share (%) in World Trade in Goods, 1970–2022
Top Seven Decliners, except China

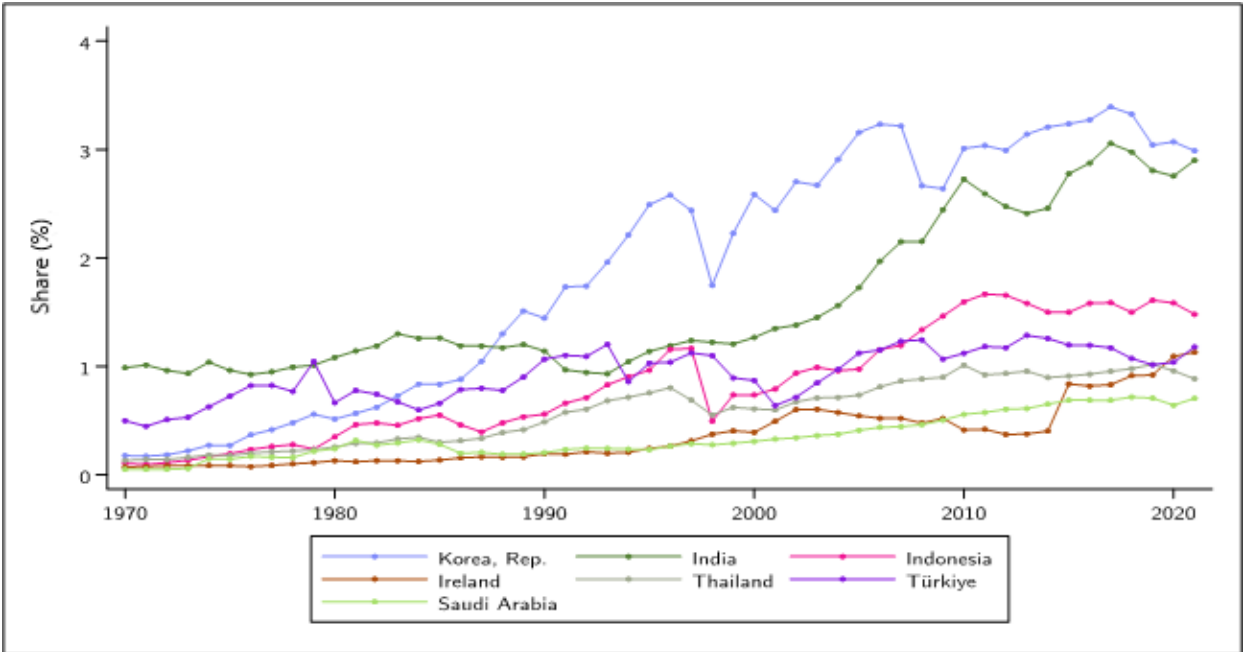


Source: Authors' calculation from UNCTAD Stat (accessed December 2022).

Manufacturing value added

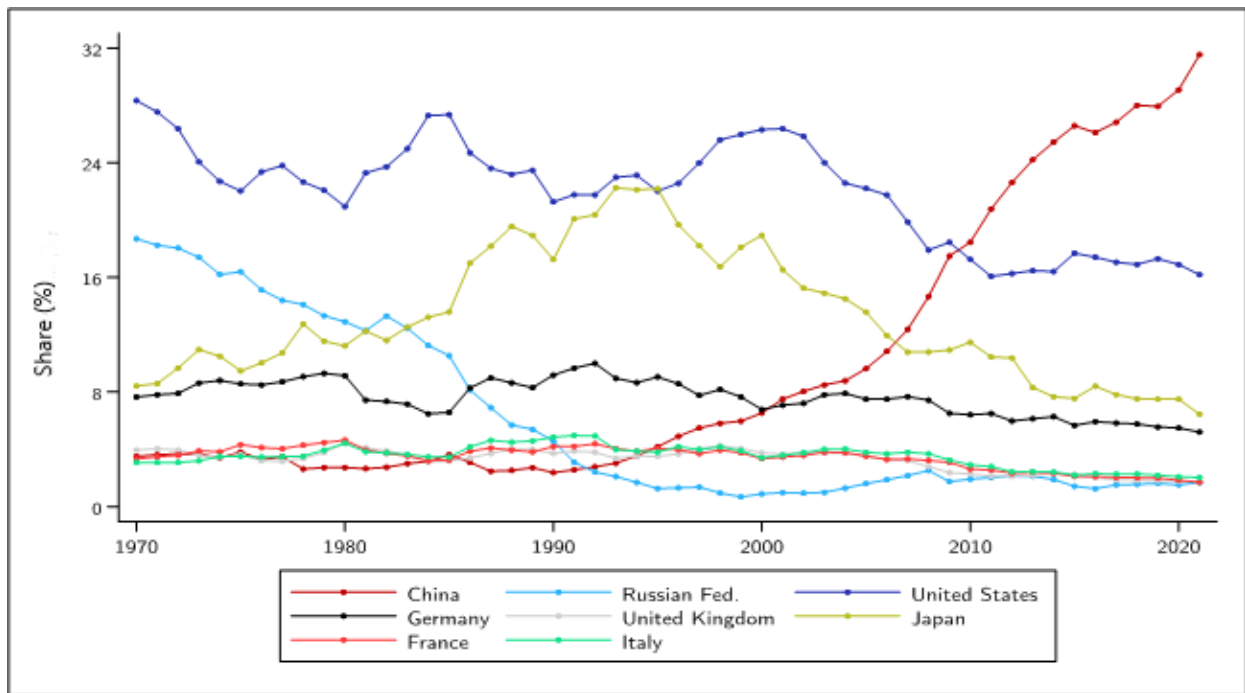
Figures 3a and 3b highlight individual countries that have gained and lost the most share in global manufacturing value added since 1970. Figure 3a traces the trajectory of the top seven gainers in global manufacturing value-added shares. Several Asian manufacturing powerhouses, including Korea, India, Indonesia, Thailand, Türkiye, and Saudi Arabia, appear on the list alongside Ireland. Figure 3b emphasises the rapid growth of China, which has risen by more than 28% since 1970. It also underscores that Russia and six G7 members – the US, Germany, the UK, Japan, France, and Italy – have lost the most shares in global manufacturing value added over the past half-century.

**Figure 3a: Share (%) in World’s Manufacturing Value Added,1970–2022
Top Seven Gainers, excluding China**



Source: Authors’ calculation from UNCTAD Stat (accessed December 2022).

Figure 3b: Share (%) in World's Manufacturing Value Added, 1970–2022
Top Seven Decliners, except China

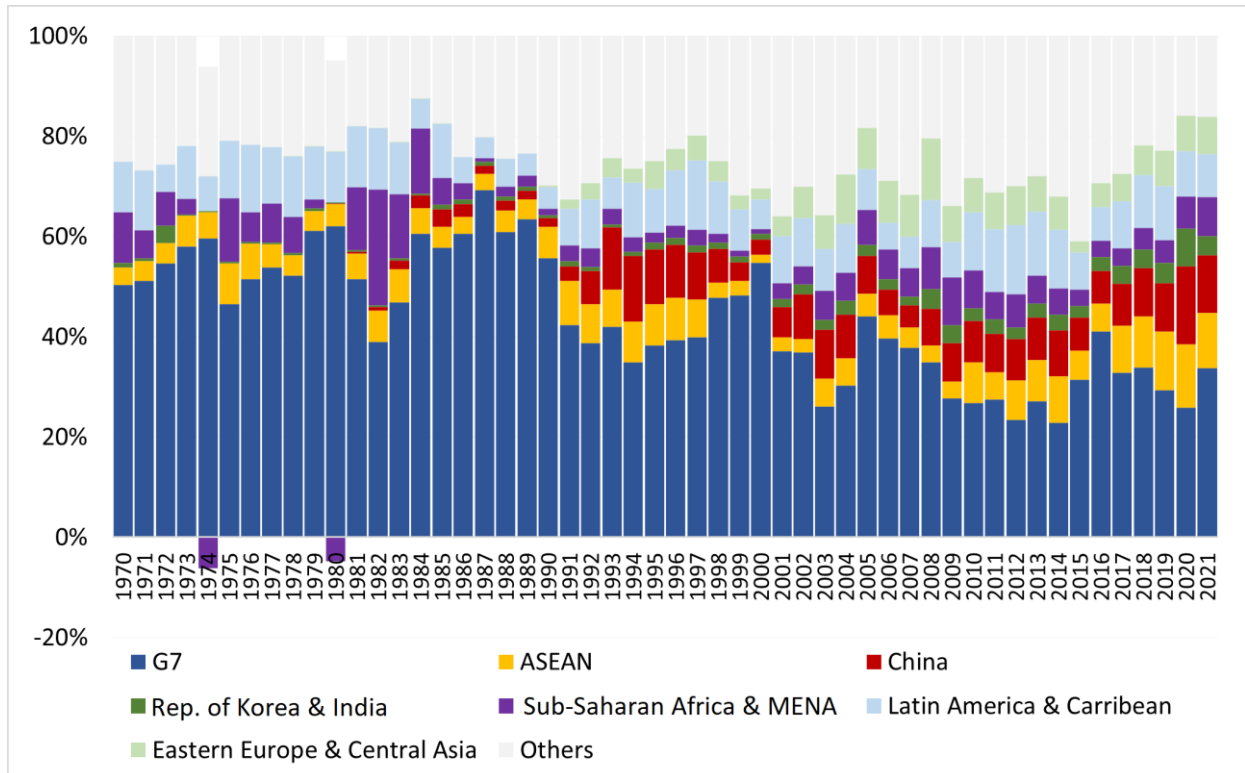


Source: Authors' calculation from UNCTAD Stat (accessed December 2022).

FDI inflows and outflows

Figure 4a illustrates the global distribution of FDI inflows in selected regions from 1970 to 2021. Despite a temporary rise until its peak in the mid-1980s, the figure reveals a substantial decline in the share of developed countries in global FDI inflow, dropping from 50.4% in 1970 to 25.8% by 2020 – a reduction of nearly 50%. Concurrently, as the Asia-Pacific region gains significance in manufacturing, there is a shift in FDI inflows towards this region. Some of the FDI that once flowed into G7 countries is now directed towards China, Korea, India, and ASEAN.

Figure 4a: Share (%) in World's FDI Inflows of Various Regions, 1970–2021

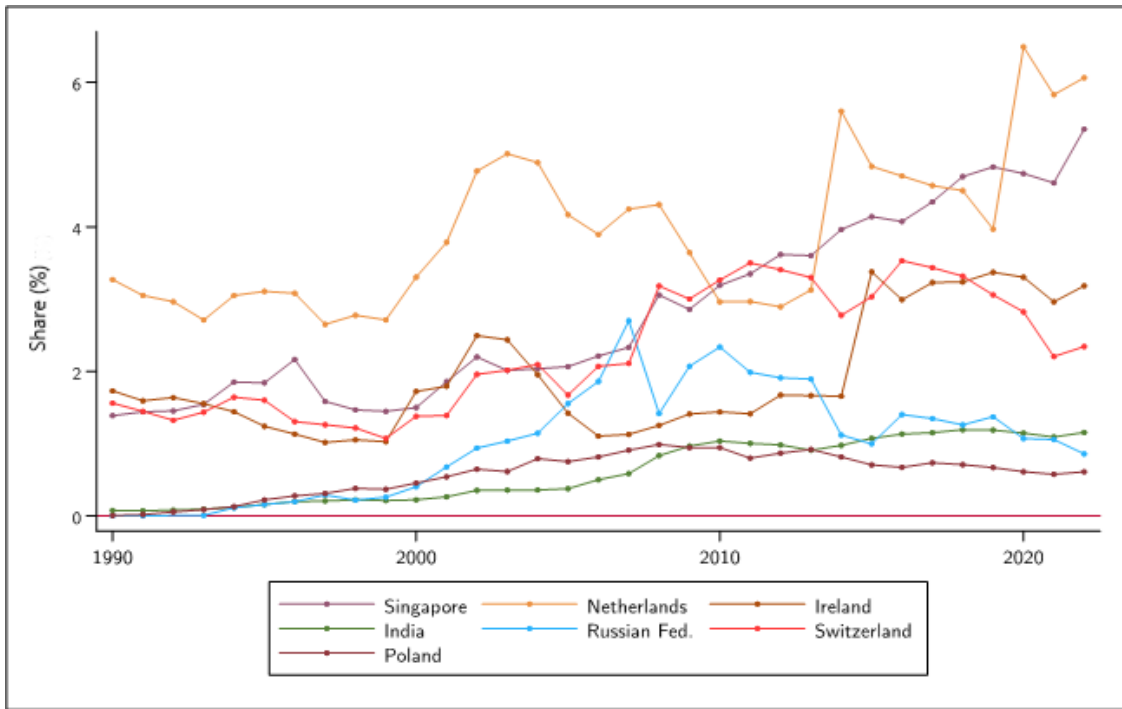


ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment, G7 = Group of Seven, MENA = Middle East and North Africa.

Source: Authors' calculation from UNCTAD Stat (accessed December 2022).

Acknowledging the limitations of the available data, Figure 4b presents the trajectory of seven countries (excluding China) that gained the greatest share in global inward FDI stock from 1990 to 2022. This approach simply compares each country's share in 1990 with that in 2022. It shows that Singapore, the Netherlands, Ireland, India, Russia, Switzerland, and Poland are amongst the top gainers in terms of their share in global inward FDI stock. Figure 4c illustrates countries that experienced the highest declines in inward FDI stock over the same period. They are Germany, the UK, Canada, France, Australia, and Italy.

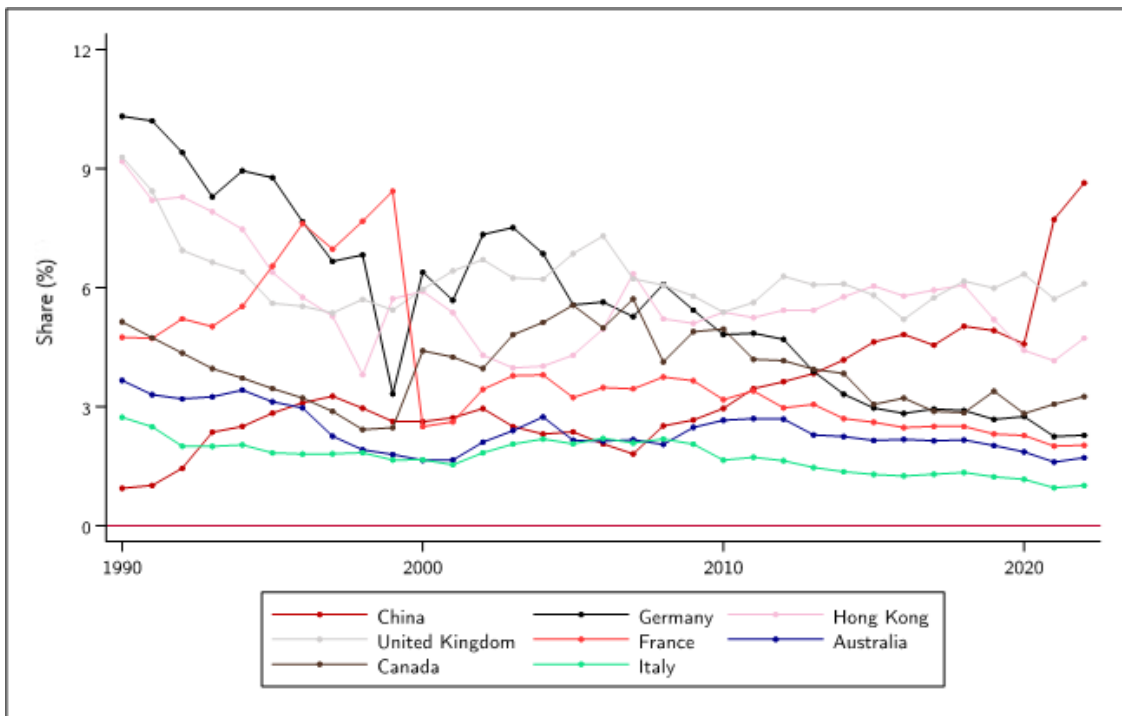
Figure 4b: Share (%) in World's Inward FDI Stock, 1990–2022
Top Seven Gainers, excluding China



FDI = foreign direct investment.

Source: Authors' calculation from UNCTAD Stat (accessed December 2022).

Figure 4c: Share (%) in World's Inward FDI Stock, 1990–2022
Top Seven Decliners, except China

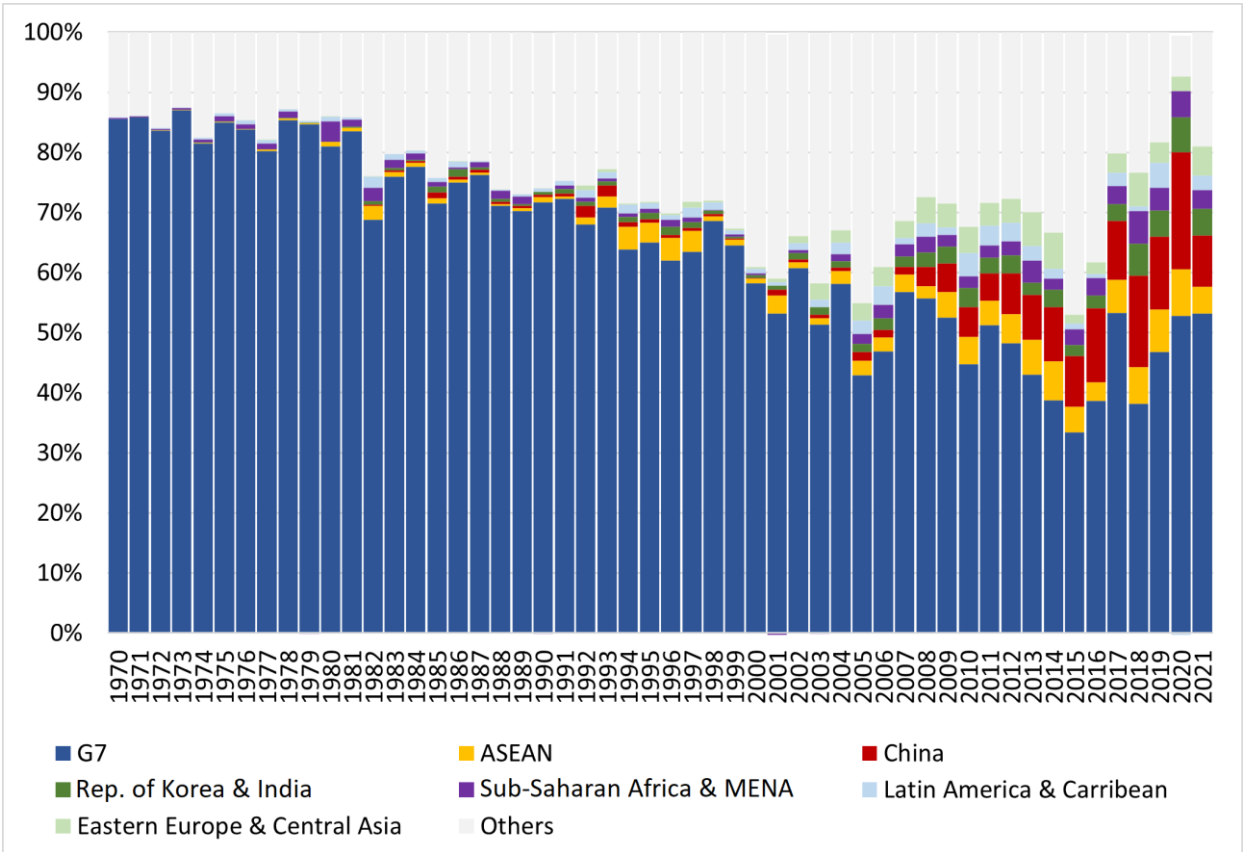


FDI = foreign direct investment.

Source: Authors' calculation from UNCTAD Stat (accessed December 2022).

Figure 5a presents the global distribution of total FDI outflows from selected regions in the past half-century. In the early 1970s, developed countries, represented by G7 nations, overwhelmingly contributed 80% or more to global FDI outflows. However, by 2021, their contribution had dwindled to 53.1%, signalling the ascent of alternative sources of global FDI outflows. The decline in developed countries’ global share of FDI outflows has been offset by significant increases in Asia-Pacific countries. China surged from virtually zero FDI outflows in the 1970s to as high as 19.7% by 2020. Similarly, Korea and India expanded from a minuscule 0.02% in 1971 to 5.9% in 2020. Similarly, Korea and India expanded from a minuscule 0.02% in 1971 to 5.9% in 2020, while ASEAN elevated its share from 0.1% in 1972 to 7.9% by 2020. These Asia-Pacific countries have expanded their combined share in global FDI outflows by 33.4% in the last 50 years, far outpacing the growth experienced by others in the same period.

Figure 5a: Share (%) in World’s FDI Outflows of Various Regions, 1970–2021

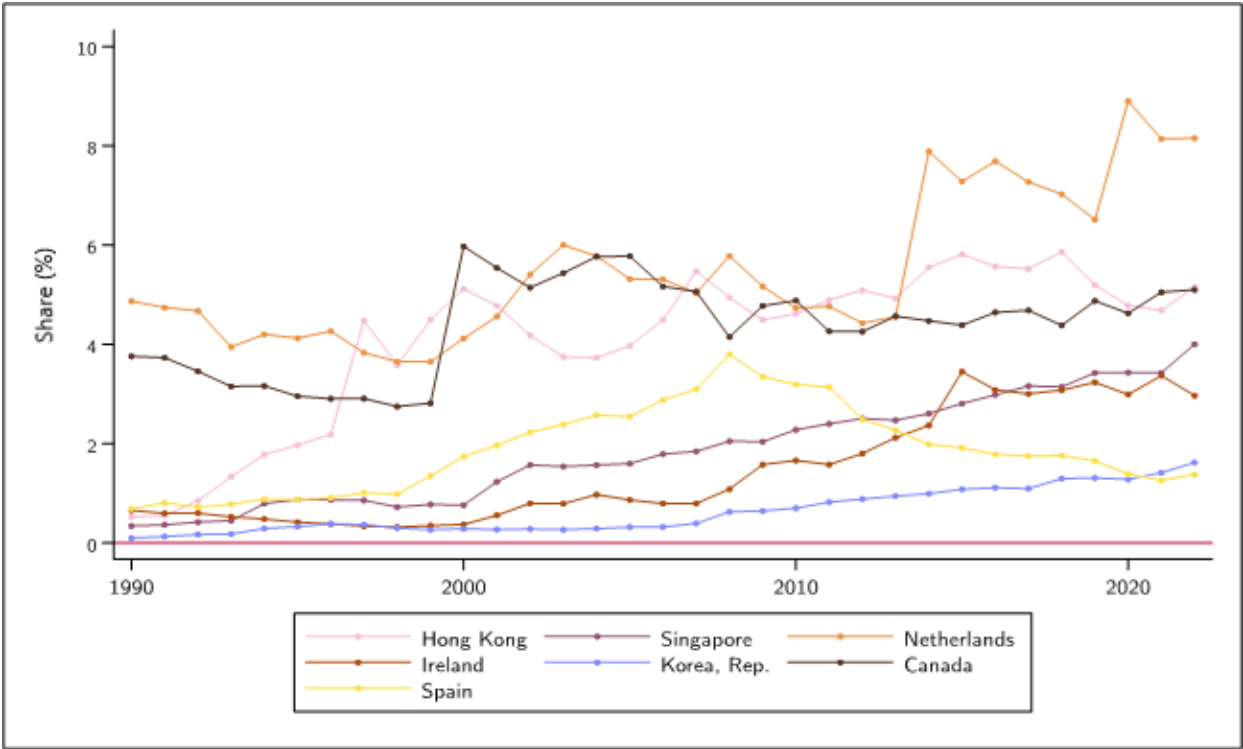


ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment, G7 = Group of Seven, MENA = Middle East and North Africa.
 Source: Authors’ calculation from UNCTAD Stat (accessed December 2022).

Figure 5b presents the trajectory of seven countries (excluding China) that gained the greatest share in global outward FDI stock from 1990 to 2022. Here, we simply compare each country’s share in 1990 with that in 2022. Four of the countries that appear amongst the top gainers

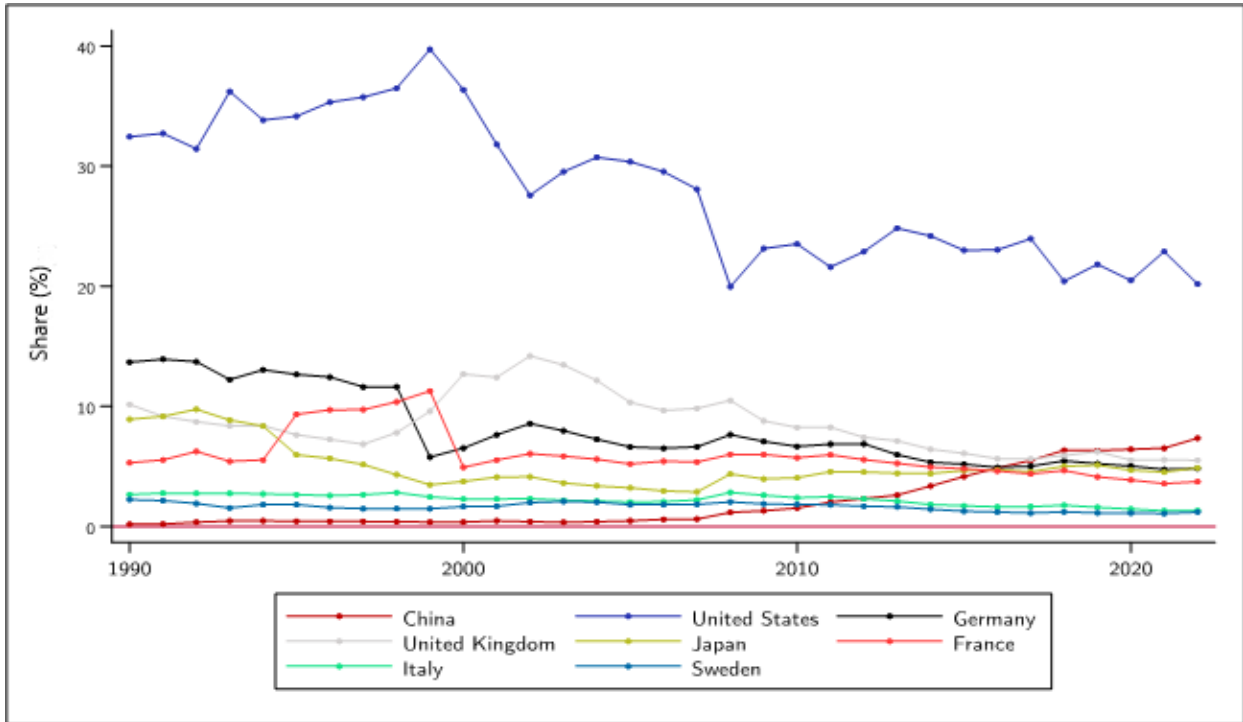
are Hong Kong, Singapore, Korea, and Canada. In addition to them, the Netherlands, Ireland, and Spain round up the top seven gainers in the share of the world’s FDI outward stock. Finally, Figure 5c presents seven countries that lost the most share in the global FDI outflow stock since 1990 and plots them alongside China’s trajectory as the top gainer. Most of the developed countries, except Canada, represent the top six decliners in the share in global outward FDI stock, with Sweden occupying the seventh position.

Figure 5b: Share (%) in World’s Outward FDI Stock, 1990–2022
Top Seven Gainers, excluding China



FDI = foreign direct investment.
 Source: Authors’ calculation from UNCTAD Stat (accessed December 2022).

**Figure 5c: Share (%) in World's Outward FDI Stock, 1990–2022
Top Seven Decliners, except China**



FDI = foreign direct investment.

Source: Authors' calculation from UNCTAD Stat (accessed December 2022).

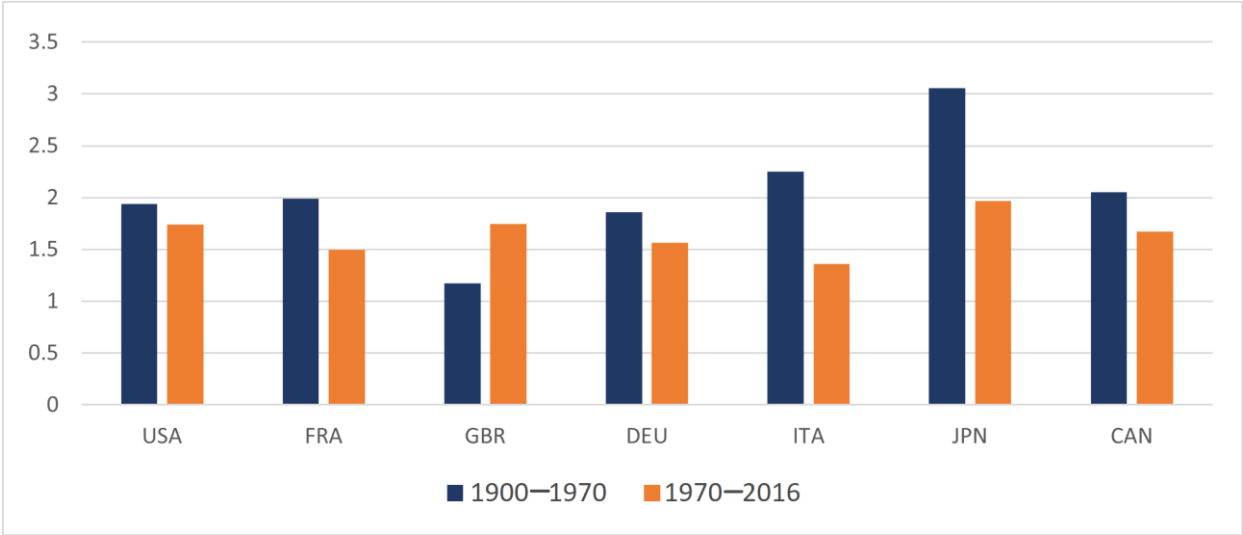
3. Economic Structure and Structural Transformation

To obtain a more comprehensive understanding of economic transformation, we extend our discussion over a more extended period. What we find is that the substantial transformations, as reflected in GDP, trade, manufacturing value added, and FDI amongst developed and emerging countries from 1970 to 2022 (as reported in section 2), are not primarily caused by significant changes in the growth performance of developed countries but rather by the rapid catch-up of a few developing countries.

As illustrated in Figures 6a and 6b, the average annual growth rate of GDP and per capita GDP in developed countries did not change significantly between 1900–1970 and 1970–2016, except for Italy and Japan. In fact, the UK experienced an increase in the later period compared with the previous one. The significant transformation in the world economic order mainly resulted from dramatic rises in only a few emerging countries, such as China, India, Indonesia, and Korea. However, during the same period, a large number of least developed and developing countries performed relatively poorly. Some, even though they have potential in terms of population size, such as Argentina and Brazil in Latin America and Nigeria in Africa, found themselves stuck in

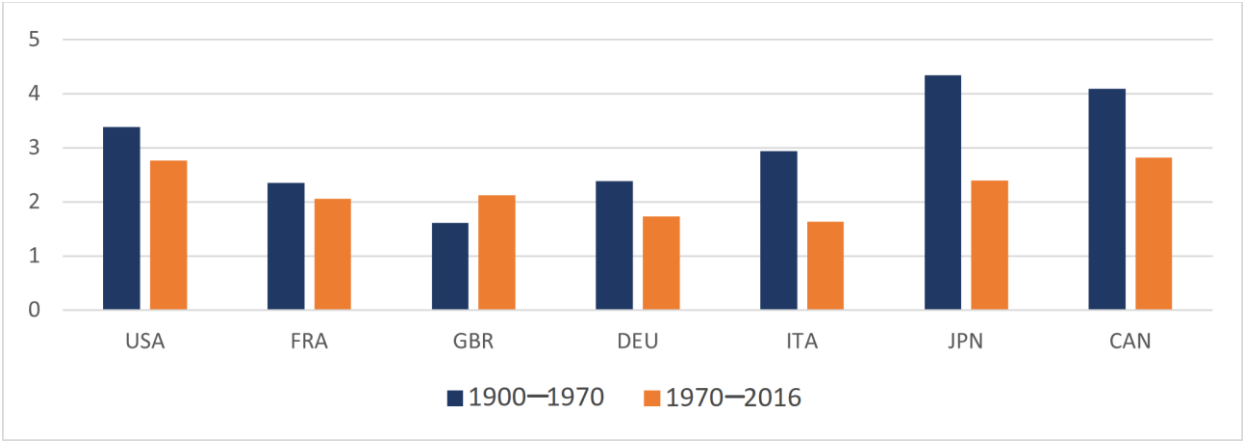
the middle-income trap. Others, like the Russian Federation, even experienced a dramatic decline. The differences in growth performance amongst developing countries in this period are mostly related to their development and economic transformation strategies.

Figure 6a: Average Annual per Capita GDP Growth Rate in G7 (%)



CAN = Canada, DEU = Germany, FRA = France, G7 = Group of Seven, GBR = United Kingdom, GDP = gross domestic product, ITA = Italy, JPN = Japan, USA = United States of America.
 Source: Authors’ calculation from Maddison Project Database (2018) www.ggd.net/maddison (accessed December 2023–January 2024).

Figure 6b: Average Annual GDP Growth Rate in G7 (%)



CAN = Canada, DEU = Germany, FRA = France, G7 = Group of Seven, GBR = United Kingdom, GDP = gross domestic product, ITA = Italy, JPN = Japan, USA = United States of America.
 Source: Authors’ calculation from Maddison Project Database (2018) www.ggd.net/maddison (accessed December 2023–January 2024).

3.1. Endowment Structure, Comparative Advantage, and Production and Trade Structure

Sustainable economic growth is a continuous process of technological innovation, elevating labour productivity, and industrial upgrading, which entails a shift from low-value-added industries to higher-value-added ones in a sustainable way. However, harnessing the potential of technologies and new industries necessitates well-functioning hard and soft infrastructure. This includes reliable electricity for the application of most modern technology, and road and port facilities for efficient product transportation to large domestic and foreign markets, enabling the full exploitation of economies of scale. As trade sizes increase, market exchanges occur at arm's length, requiring robust contracts and legal systems for contract enforcement. Additionally, with the scaling and risks associated with technological and industrial upgrading, the financial structure must also adapt. Consequently, the entire 'soft' infrastructure of institutions needs improvement (Kuznets, 1966; Lin, 1989; Lin and Nugent, 1995; Harrison and Rodríguez-Clare 2010). Therefore, while modern economic growth may seem like a process of rising labour productivity, it is, in reality, a continuous process of structural changes encompassing technologies, industries, and both hard and soft infrastructure.

In general, developed countries have capital-intensive industries, while developing countries, in contrast, have land-intensive and/or labour-intensive industries. This difference in industrial structures reflects variations in their factor endowments – the amounts of capital, labour, and natural resources available at a given time. Developing countries typically face relative scarcity of capital, while labour and often natural resources are relatively abundant. Conversely, developed countries enjoy relative abundance of capital, while labour is relatively scarce. Although an economy's factor endowments are fixed at any particular time, they can change over time. Furthermore, the structure of endowments determines the relative prices of factors: the prices of relatively abundant factors are low, while the prices of relatively scarce factors are high. This implies that the relative prices of capital, labour, and natural resources differ in countries at different development stages. These price differences play a crucial role in determining a country's comparative advantages, production pattern, and trade pattern at each stage of development.

In developed countries, high income and labour productivity result from their relative capital abundance, leading to capital-intensive industries and technologies. For a developing country aspiring to match the income and industrial structure of developed nations, the initial step is to elevate the relative abundance of capital in its factor endowment structure to the level seen in advanced countries. The ultimate objective of economic development is to increase a country's income. The intermediate goal involves developing capital-intensive industries, while the

immediate focus should be on swiftly accumulating capital to shift the country's comparative advantage towards more capital-intensive industries (Box 1). In essence, elevating a country's income necessitates industrial upgrading, and achieving industrial upgrading requires a transformation in the country's endowment structure (Ju, Lin, and Wang, 2015).

Box 1: How Can a Country Quickly Accumulate Capital?

To accumulate capital quickly, a country can employ the following strategies:

- (i) **Align industries with comparative advantages:** Ensure that the country's industries align with its comparative advantages, as determined by its endowment structure, in a market economy with a facilitating state to overcome market failures in the improvements of hard and soft infrastructure. This alignment enhances competitiveness in both domestic and international markets, leading to the generation of the largest possible economic surplus.
- (ii) **Optimal investment allocation:** Direct investment in industries consistent with the comparative advantages derived from the country's endowment structure. By doing so, returns on investment can be maximised, resulting in a higher propensity to save.
- (iii) **Maximise returns on investment:** By focusing on industries that leverage the country's comparative advantages, the returns on investments are optimised. This, in turn, encourages higher savings rates, contributing to the rapid accumulation of capital.
- (iv) **Enhance surplus generation:** Ensure that the economic surplus generated by the country is maximised. When industries are in line with comparative advantages, they are more likely to operate efficiently, leading to increased surplus generation.
- (v) **Create incentives for saving:** Establish policies and incentives that encourage saving. This can be achieved by fostering a favourable environment for investment in industries aligned with the country's comparative advantages.
- (vi) **Facilitate changes in industrial infrastructure:** Recognise that changes in endowment structure and comparative advantages lay the groundwork for alterations in industrial structure. Ensure that the accompanying hard and soft industrial infrastructure evolves to support these changes.

By adopting these measures, a country can create the conditions conducive to rapid capital accumulation, fostering economic development and growth.

Source: Authors.

3.2. Role of Market and State in Structural Transformation

Comparative advantage is an economic concept. How is it translated into the choices of technologies and industries made by entrepreneurs? Entrepreneurs pursue profits. They will invest in industries in which a country has a comparative advantage if relative factor prices reflect the relative scarcity of factors in the country's endowments (Lin, 2009; Lin and Chang, 2009). If capital is relatively scarce, the price of capital should be relatively high; if labour is relatively scarce, the price of labour (wages) should be relatively high. With such a price system, profit-maximising entrepreneurs will use a relatively inexpensive factor to substitute for a relatively expensive factor in their choice of production technologies, investing in industries that require more of a relatively inexpensive factor and less of a relatively expensive factor. A price system with these characteristics can arise only in a competitive market. That is why successful economies are either market economies or on their way to becoming one.

While markets play a crucial role in allowing a country to align with its factor endowments and determined comparative advantages for technology adoption and industrial development, the government's role in economic development is equally vital. Economic development entails a process of structural transformation characterised by continuous technological innovations, industrial upgrading, and improvements in infrastructure and institutions.

As the factor-endowment structure evolves, economies necessitate first movers – enterprises willing to embrace new technology and venture into industries consistent with changing comparative advantages. Nevertheless, the risks for these pioneers are substantial; if they fail, they bear all the losses, and if they succeed, other firms are likely to follow suit. The resulting competition eliminates any monopoly profits (Romer, 1990; Aghion, 2009). An asymmetry exists between the losses of failures and the gains of successes for the first movers (Hausmann and Rodrik, 2003). Regardless of success or failure, first movers provide valuable information to society.

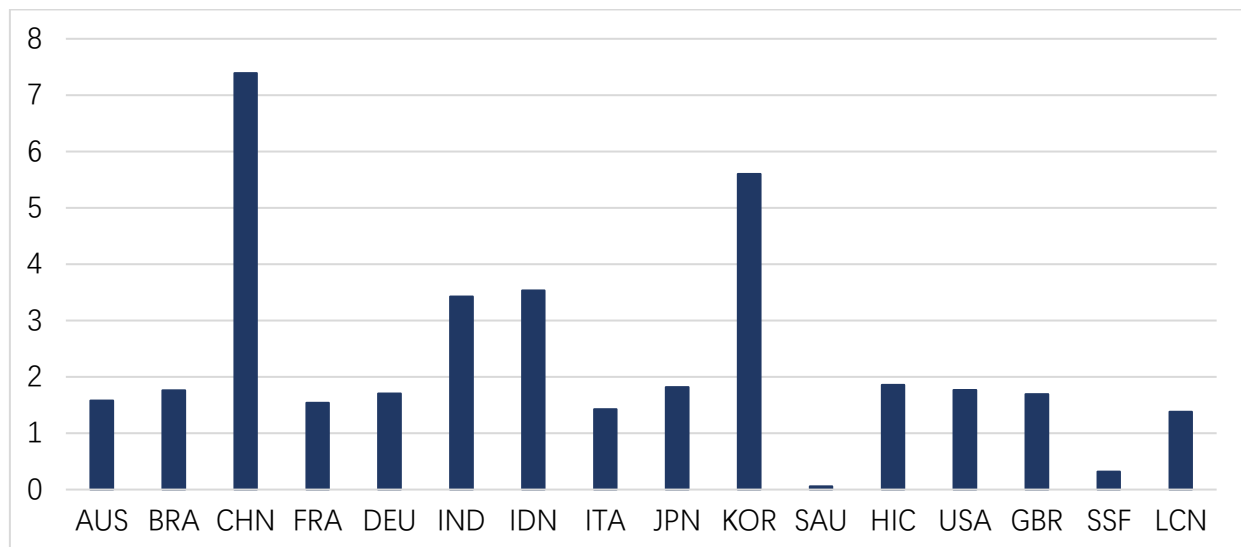
The government's role should be to encourage and facilitate first movers for the information externality they generate. Otherwise, there will be little incentive for firms to be pioneers in technological innovation and industrial upgrading (Rodrik 2004; Lin 2009, 2011a, 2011b; Harrison and Rodríguez-Clare, 2010). The success or failure of first movers also depends on whether improved hard and soft infrastructure matches the needs of the new technologies and industries. Since improving infrastructure and institutions is beyond the capacities of individual firms, the government needs to either coordinate firms' efforts in this regard or provide the necessary improvements itself to avoid the middle-income or poverty trap (Lin, 2017).

3.3. Dynamic Transformation, Structural Stagnation, and Premature Deindustrialisation

Before the industrial revolution in the 18th century, all countries relied on agriculture and were economically impoverished. According to Maddison's estimates, it took about 1,400 years to double per capita income in Western Europe before the 18th century (Maddison, 2001). The industrial revolution, referred to as a singular event in human history by Clark (2007), commenced in the UK in the mid-18th century, marking a significant turning point in the economic progress of nations. Rapid technological innovation following the advent of the industrial revolution created new tools with higher productivity and new industries with higher values, not only breaking the Malthusian trap but also leading to a dramatic increase in per capita income (Kuznets, 1966).

From the 18th century to the mid-19th century, the annual growth rate of per capita GDP surged 20 times to 1% in Western Europe and the Western offshoots in North America and Australia (Maddison, 2001). This rate doubled to around 2% per year thereafter. Developing countries have the advantage of backwardness in technological innovation, potentially enabling them to grow faster than developed countries (Gerschenkron, 1962). As shown in Figure 7, successful developing countries such as China, India, Indonesia, and Korea were able to double or even triple the annual growth rate of high-income countries from 1970 to 2022. However, countries in Latin America and the Caribbean, as well as in Sub-Saharan Africa, experienced lower annual per capita GDP growth rates of 1.38% and 0.32%, respectively, compared with the 1.86% rate observed in high-income countries during the same period.

Figure 7: Growth Rate of per Capita GDP, 1970–2022
(%)



AUS = Australia, BRA = Brazil, CHN = China, DEU = Germany, FRA = France, GBR = United Kingdom, GDP = gross domestic product, HIC = high-income countries, IND = India, IDN = Indonesia, LCN = Latin America and the Caribbean, ITA = Italy, JPN = Japan, KOR = Korea, SAU = Saudi Arabia, SSF = Small States Forum, USA = United States of America.

Source: Authors' calculation from World Bank (n.d.), World Development Indicators. <https://databank.worldbank.org/source/world-development-indicators> (accessed December 2022).

The diverse growth performance of developing countries has largely stemmed from differences in the development ideas they embraced. After World War II, developing nations shared a common aspiration: catching up with developed countries to ensure their people could attain similar income levels. To achieve this goal, most developing and least developed countries, regardless of their alignment with socialist or non-socialist ideologies, adopted a structuralist state-led import-substitution strategy. This approach aimed to develop capital-intensive industries akin to those in developed countries.

Unfortunately, import-substitution policies did not work well in most countries, as the selection of prioritised industries (referred to as ‘picking winners’) often contradicted their comparative advantages. This resulted in firms in those sectors being non-viable in an open and competitive market. Governments resorted to various price distortions and direct interventions to allocate resources for the development of advanced modern industries and shield them from foreign competition (infant industry policy). As a consequence, several economies faced stagnation and frequent crises, leading to a widening income gap between developed and developing countries.

The failure of the heavy import-substitution state-led development approach led to the emergence of neoliberalism in the 1970s and 1980s, which viewed government interventions as the primary reason for the failure of developing countries to catch up with developed nations. Neoliberalism advocates for a minimal state, advising developing countries to institute well-functioning market institutions similar to those in developed countries through shock therapy. It believes that dynamic growth and structural transformation will happen spontaneously once there is a well-functioning market. However, the results for developing countries were disappointing. The growth rate in the 1980s and 1990s was lower than that in the 1960s and 1970s, and the frequency of crises was even higher than in the 1960s and 1970s (Easterly, 2001). Many countries in Latin America and Africa also encountered premature deindustrialisation (Felipe, Mehta, and Rhee, 2014; Palma, 2005; Rodrik, 2016). The income gap between developed and developing countries was further widened.

Interestingly, a few countries that successfully accelerated their growth and narrowed the gap with developed nations did not adhere to the approaches proposed by the dominant development thinking of that time. In the 1950s and 1960s, Japan and the four Asian tigers – Korea, Taiwan, Singapore, and Hong Kong – progressively caught up with developed countries. These newly industrialising economies experienced rapid growth from the 1950s to the 1970s by adopting an export-oriented development strategy. They initially focused on labour-intensive, small-scale industries and gradually climbed the industrial ladder to larger, more capital-intensive sectors (Amsden, 1989; Wade, 1990; Lin, 2009; Chang, 2003). Their approach contradicted the prevailing structuralism, which advocated import substitution to immediately build up large, heavy industries (World Bank, 1993).

Before the implementation of market-oriented reforms, many non-viable firms existed in sectors that defied comparative advantage in transition countries. Without government support, these firms may not have been able to survive in an open and competitive market. Such support mechanisms were endogenous to the viability issue of the protected firms (Lin and Tan, 1999) and often took the form of second-best arrangements. If there were only a limited number of such non-viable enterprises, and they were not related to essential services like power, telecommunications, or national security, the output value and employment of those firms would be constrained. In such cases, shock therapy, which eliminates all government interventions at once, might be applicable. With the abolition of government protection and subsidies, these non-viable enterprises would go bankrupt. However, the originally suppressed labour-intensive industries would thrive, and the newly created employment opportunities in these sectors could outweigh the losses from the bankruptcy of non-viable firms. As a result, the economy could experience

dynamic growth soon after implementing the shock therapy, which Bolivia achieved in the 1980s following the recommendation of Jeffrey Sachs.

On the contrary, if the number of non-viable firms were large and their employment constituted a significant share of the national economy and/or their services were essential for normal economic operations, shock therapy (instead of achieving the intended optimal result) would exacerbate economic performance due to the second-best nature of those protections and subsidies (Lipsey and Lancaster, 1956). The government often adopted other more disguised and costly measures after the shock therapy, and many owners of telecommunications and other large enterprises became oligarchs, leading to the lost decades observed in many transition economies in Eastern Europe, the former Soviet Union, and Latin America (Lavigne, 1995; Easterly, 2001).

Therefore, it would be desirable to have a gradual transition strategy by providing transitional support to non-viable firms in the old priority sectors while facilitating private firms' entry into sectors that are consistent with the country's comparative advantage. Economic stability and dynamic growth could be achieved simultaneously through this pragmatic measure. With dynamic growth, capital will be accumulated and the factor endowment structure as well as comparative advantages will change fast. Many firms in the previously priority sector will turn from non-viable to viable, making protections and subsidies unessential. By that time, the economy is ready to eliminate distortions and subsidies and transition to a well-functioning market economy (Lin, 2009; 2014).

Overall, a developing country with well-designed development and transition strategies can grow faster than developed countries and thus increase its share in global output, as depicted in Figures 1a and 1b. In the catching-up process, it will move up the industrial ladder from resources-/labour-abundant industries to increasingly capital- and technology-intensive manufacturing industries, as shown in Figures 2a and 2b. With the fast increase in its economic size, the country's shares in global trade will also increase, as shown in Figures 3a and 3b. Moreover, the country will attract inward FDI to use the country as a production base for exports as well as to penetrate its increasingly large domestic market, as shown in Figures 4a–4c. Meanwhile, in its structural transformation process, the country will facilitate outward FDI to relocate comparative advantage-losing industries to relatively capital-scarce countries and to help industries that have comparative advantages enter and become established in the markets of other countries, as shown in Figures 5a–5c.

4. Policy Recommendations

Drawing on insights from the growth and structural transformation patterns observed in both developed and developing countries, as discussed in the previous two sections, and considering the emerging opportunities and challenges posed by the Fourth Industrial Revolution – particularly in the context of digitalisation, which is poised to exert substantial influence on a country’s growth performance and the global economic order in the future – certain policy recommendations come to the forefront.

(i) Optimise comparative advantage and effective infrastructure

A critical element of economic transformation involves a country’s capacity to optimise its comparative advantage and implement effective interventions, particularly focusing on both hard and soft infrastructure. It is crucial to strike a balance between interventions by state and market forces. Emphasising the state’s role is essential in creating a favourable trade and investment environment that facilitates entrepreneurs in developing industries with latent comparative advantages. This involves identifying and addressing externalities that the market might not efficiently correct on its own, such as removing infrastructural bottlenecks, and, if necessary, incentivising first movers (particularly in research and development).

Effective infrastructure development extends beyond physical structures such as roads, bridges, and special economic zones. A crucial aspect is the development of soft infrastructure, encompassing education systems, healthcare, public services (electricity and information and communication technology, clean water, and waste management), digital connectivity, and a robust legal and financial framework. Well-developed infrastructure significantly enhances a country’s global competitiveness by reducing the cost of doing business, improving efficiency, attracting foreign investment, and increasing trade, thereby allowing firms to operate at optimal levels of economies of scale.

The most important thing is to recognise that *a country’s comparative advantage is not static* but evolves over time. Dynamic economic growth alters the economy’s endowment structure and comparative advantages. Policymakers must remain vigilant and adaptive, ready to shift focus as the economy grows and changes, adopting realistic and context-specific strategies.

(ii) Transition strategy

It is inherent in economic cycles that many countries inherit various distortions due to the previous government’s political and economic development strategy, or a combination of both.

The effectiveness of transition policies often depends on their phased implementation. A gradual transition strategy may be desirable. This approach involves providing the necessary support to non-viable firms in industries that defy comparative advantages while offering support to new industries aligned with latent comparative advantages. Such a strategy may help the country achieve stability and dynamic growth simultaneously during the transition process.

Gradual transformation, both in political and economic stances, will lead to a successful transition. First, governments should establish a clear timeline and exit strategy for any incentives and facilities provided to specific sectors or industries. This ensures that support is phased out systematically. Second, recognising that a country's comparative advantage is dynamic, it is crucial to ensure that all sectors keep pace with new developments and technologies. Regular assessments should guide adjustments in the focus of support. Third, beyond the active promotion of special economic zones, governments should focus on developing human capital capable of adapting to new technologies. This includes initiatives to enhance the skills of the workforce, enabling mobility across sectors. By addressing these aspects, governments can facilitate a smooth and manageable transition, minimising disruptions while steadily integrating the economy into the global market.

(iii) Optimise the use of digital transformation

Digitalisation, which involves using internet-of-things information systems to digitise and 'intelligise' logistics, supply chains, manufacturing, delivery, sales, personalised customer preferences, and all management tasks, ultimately aims to achieve fast, effective, and personalised product supply. This phenomenon is known as Industry 4.0 or the Fourth Industrial Revolution, following the steam turbine era, electrification era, and information age. Such a revolution offers unparalleled opportunities for economic transformation in both developed and developing countries.

Similar to the structural transformation driven by technological innovation and industrial upgrading in previous industrial revolutions, governments play a pivotal role in harnessing the opportunities presented by digitalisation. This requires a multifaceted strategy that includes developing digital infrastructure, fostering digital literacy and skills, and creating a regulatory environment conducive to digital innovation.

Digitalisation should be integrated into broader economic development strategies, recognising digital technology not merely as a sector but as a key enabler across all sectors of the economy, including agriculture, manufacturing, and services. Effective digital transformation necessitates collaboration between the public and private sectors. Governments can play a role in

facilitating this collaboration, ensuring that the private sector's innovation and efficiency align with public goals, including customer security, inclusivity, and sustainability.

Investing in digital infrastructure should go beyond traditional physical infrastructure. It involves the development of broadband networks, mobile connectivity, and digital platforms that are accessible to all segments of society. This infrastructure forms the backbone of a modern digital economy, enabling businesses and individuals to participate fully in digital activities. Special attention should be given to rural and underserved areas to ensure equitable access to digital infrastructure. Bridging the urban–rural digital divide is crucial for inclusive economic growth. Part of digital infrastructure development includes enhancing e-government services. Making government services more accessible and efficient through digital means can significantly improve public sector efficiency and transparency.

Governments should formulate policies and legal frameworks that establish a conducive environment and a level playing field for digital innovation. This involves regulatory structures that not only encourage entrepreneurship but also safeguard intellectual property and facilitate investments in the digital sector. Small and medium-sized enterprises and start-ups are often at the forefront of digital innovation, and governments should establish support systems for these entities. This support could include access to finance, mentorship programs, and the creation of innovation hubs.

Ensuring that the benefits of digitalisation are accessible to all sections of society is crucial. Policies should work to reduce the digital divide by providing access to digital technologies and internet connectivity, particularly in underprivileged and remote communities. Additionally, governments should develop robust policies and regulations to ensure customer protection, data privacy, and cybersecurity.

As economies undergo digitalisation, the skills required by the workforce undergo a transformation. Governments must adapt their education and training systems accordingly to meet these changing demands. This adaptation involves not only integrating digital skills into curricula but also cultivating an educational environment that fosters creativity, critical thinking, and adaptability. The rapid pace of technological change underscores the importance of focusing on lifelong learning and continuous skill development. Governments should promote and support ongoing education and reskilling opportunities for workers to remain relevant in the evolving job market. Collaborating with industry to develop education and training programs is crucial to ensure that the skills taught align with market needs. This collaboration could take the form of partnerships with tech companies, industry-led training programs, and apprenticeships.

In essence, digital technologies pave the way for economic diversification. Embracing these technologies enables countries to forge new sectors and revitalise existing industries, fostering a more diversified and resilient economy. The transformative power of digitalisation extends to traditional industries, rendering them more efficient, innovative, and competitive. This transformative process involves the integration of digital technologies into sectors like agriculture, manufacturing, and services, amplifying productivity and expanding market reach. Simultaneously, the development of high-value digital services – such as software development, digital content creation, and data analytics – creates new economic avenues and propels nations up the value chain in the global economy.

References

- Aghion, P. (2009), ‘Some Thoughts on Industrial Policy and Growth’, *Document de Travail*, No. 2009-09. Paris: Observatoire Français des Conjonctures Économiques, Sciences Po.
- Amsden, A.H. (1989), *Asia’s Next Giant: South Korea and Late Industrialization*. New York and Oxford: Oxford University Press.
- Chang, H.-J. (2003), *Kicking Away the Ladder: Development Strategy in Historical Perspective*. London: Anthem Press.
- Clark, G. (2007), *A Farewell to Alms: A Brief Economic History of the World*. Princeton, NJ: Princeton University Press.
- Easterly, W. (2001), ‘The Lost Decades: Developing Countries’ Stagnation in Spite of Policy Reform 1980–1998’, *Journal of Economic Growth*, 6(2), pp.135–57.
- Felipe, J., A. Mehta, and C. Rhee (2014). ‘Manufacturing Matters... But It’s the Jobs that Count’, *ADB Economics Working Paper Series*, No. 420. Manila: Asian Development Bank.
- Gerschenkron, A. (1962), *Economic Backwardness in Historical Perspective*. Cambridge, MA: Belknap Press, Harvard University Press.
- Harrison, A. and A. Rodríguez-Clare (2010), ‘Trade, Foreign Investment, and Industrial Policy for Developing Countries’, in D. Rodrik and M. Rosenweig (eds.) *Handbook of Economic Growth*, Volume 5. Amsterdam: North-Holland, pp.4039–4213.
- Hausmann, R. and D. Rodrik (2003), ‘Economic Development as Self-Discovery’, *Journal of Development Economics*, 72(2), pp.603–33.

- Ju, J., J.Y. Lin, and Y. Wang (2015), 'Endowment Structures, Industrial Dynamics, and Economic Growth', *Journal of Monetary Economics*, 76, pp.244–63.
- Kuznets, S. (1966), *Modern Economic Growth: Rate, Structure and Spread*. New Haven, CT and London: Yale University Press
- Lavigne, M. (1995), *The Economics of Transition: From Socialist Economy to Market Economy*. New York: St. Martin's Press.
- Lin, J.Y. (1989), 'An Economic Theory of Institutional Change: Induced and Imposed Change', *Cato Journal*, 9(1), pp.1–33.
- (2009), *Economic Development and Transition: Thought, Strategy, and Viability*. Cambridge, UK: Cambridge University Press.
- (2011a), 'DPR Debate: Growth Identification and Facilitation: The Role of State in the Process of Dynamic Growth', *Development Policy Review*, 29(3), pp.264–90; and 'Rejoinder', pp.304–09.
- (2011b), 'New Structural Economics: A Framework for Rethinking Development', *World Bank Research Observer*, 26(2), pp.193–221.
- (2014), 'The Washington Consensus Revisited: A New Structural Economics Perspective', *Journal of Economic Policy Reform*, 18(2), pp.96–113.
- (2017), 'Industrial Policies for Avoiding the Middle-Income Trap: A New Structural Economics Perspective', *Journal of Chinese Economic and Business Studies*, 15(1), pp.5–18.
- Lin, J.Y. and H.-J. Chang (2009), 'DPR Debate: Should Industrial Policy in Developing Countries Conform to Comparative Advantage or Defy It?', *Development Policy Review*, 27(5), pp.483–502.
- Lin, J.Y. and J.B. Nugent (1995), 'Institutions and Economic Development', in J. Behrman and T.N. Srinivasan (eds.) *Handbook of Development Economics*, Volume 3, Part B. Amsterdam: North Holland, pp.2301–70.
- Lin, J.Y. and B. Tan (1999), 'Policy Burdens, Accountability, and the Soft Budget Constraint', *American Economic Review*, 89(2), pp.426–31.
- Lipsey, R.G. and K. Lancaster (1956), 'The General Theory of Second Best', *Review of Economic Studies*, 24(1), pp.11–32.

- Maddison, A. (2001), *The World Economy: A Millennial Perspective*, Development Centre Studies. Paris: Organisation for Economic Co-operation and Development (OECD) Development Center.
- (2010), Historical Statistics of the World Economy: 1–2008 AD. www.ggdc.net/maddison/historical_statistics/horizontle-file_02-2010.xls (accessed December 2023–January 2024).
- Palma, J.G. (2005), ‘Four Sources of “De-Industrialization” and a New Concept of the “Dutch Disease”’, in J.A. Ocampo (ed.) *Beyond Reforms: Structural Dynamics and Macroeconomic Vulnerability*. Stanford, CA: Stanford University Press and the World Bank, pp.71–116.
- Rodrik, D. (2016), ‘Premature Deindustrialization’, *Journal of Economic Growth*, 21, pp.1–33.
- (2004), ‘Industrial Policy for the Twenty-First Century’. <https://drodrik.scholar.harvard.edu/files/dani-rodrik/files/industrial-policy-twenty-first-century.pdf>
- Romer, P.M. (1990), ‘Endogenous Technological Change’, *Journal of Political Economy*, 98(5), pp. S71–S102.
- Wade, R. (1990), *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*. Princeton, NJ: Princeton University Press.
- World Bank (1993), *The East Asian Miracle: Economic Growth and Public Policy*. Oxford: Oxford University Press.

Appendix

Notes on the details of inclusion and exclusion of countries (Figures 1–5):

The preceding section presented the results from our examination of top gainers and decliners in the global share across five selected economic metrics. Several details are applied in the data cleaning process. First, we exclusively consider only countries with a minimum global share of 0.4% in a particular metric in the most recent available year, predominantly either 2021 or 2022. We then omit countries widely recognized as tax havens from our analysis to prevent potential distortions, especially in metrics related to foreign direct investment (FDI). Second, we want to emphasise that our data cleaning treats Russia and the former Soviet Union as the same entity due to data limitations. Essentially, this involves merging the data of the former Soviet Union prior to 1990 with that of Russia from 1990 onwards. We treat it as a single, unified observation named the Russian Federation. We then compare the changes in each economic metric since the 1970s with those of all other countries. It is crucial for readers to consider this caveat when interpreting the figures related to either the Russian Federation or the Eastern Europe and Central Asia (EECA) region throughout this study.

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