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Industrialization in Africa: Lessons from Southeast Asia and Policy Implications

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I. Introduction

Industrialization has long been regarded as a central driver of economic development. By reallocating labor and capital from low-productivity activities to higher-productivity manufacturing and modern services, industrialization promotes productivity growth and structural transformation.

The experiences of both developed and emerging economies demonstrate the pivotal role of manufacturing in achieving sustained economic growth. A large body of theoretical and empirical studies support the view that manufacturing serves as a primary catalyst for economic development through learning-by-doing, structural change, scale economies, infant industry development, endogenous technical progress, and integration into global value chain (Arrow 1962; Chenery 1988; Murphy, Shleifer, and Vishny 1989; Romer 1986; Lucas 1988; Gereffi 1999; Chang 2002).

For Africa, industrialization remains pivotal to the continent's long-term development prospects. While historical trends have shown a concerning premature industrialization in Africa, recent years have witnessed a reversal in manufacturing employment growth (Rodrik 2016; Lectard 2023). As there is substantial heterogeneity in manufacturing output and employment across time and regions within Africa, structural transformation through manufacturing development remains a viable pathway for economic growth across much of the continent (Nguimkeu and Zeufack 2024).

Industrialization remains particularly strong for Africa, but the global environment for late industrialization has become increasingly

challenging. Many African economies continue to rely heavily on primary commodity exports, while importing a large share of manufactured goods. Moreover, automation, protectionism, geopolitical fragmentation, and stringent climate-related standards have made the traditional export-led manufacturing model more difficult to replicate. The nature of industrial policy has also evolved. Recent industrial policies increasingly seek to reinforce and upgrade sectors in which countries already possess comparative advantages. Industrial policy interventions have also become more intensive in advanced economies than in developing countries, highlighting the growing importance of state capacity and fiscal resources in policy implementation.

Against this backdrop, Southeast Asia provides a useful benchmark for Africa. Since the 1980s, the region has achieved rapid industrialization through export-oriented growth strategies by attracting foreign direct investment, expanding manufacturing capacity, and integrating into regional and global production networks. Although Africa differs in its historical, institutional, and economic circumstances, the experience of the Southeast Asian region offers important lessons on the conditions under which industrialization can support export diversification, structural transformation, and economic development.

This brief compares the growth pathways of Southeast Asia and Africa, and draws policy implications for Africa's industrial transformation. It assesses both the opportunities and constraints facing industrialization in Africa as the continent seeks to establish itself as a more significant participant in global manufacturing amid a rapidly evolving international economic landscape.[1]

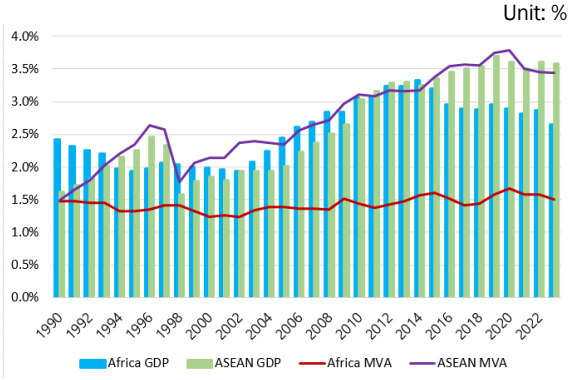
II. Growth Pathways of Southeast Asia and Africa

1. Diverging Development Trajectories

In the early 1990s, Africa and Southeast Asia occupied broadly comparable positions in the global economy, with Africa accounting for a larger share of global GDP than ASEAN. Since then, however, the two regions have followed markedly divergent trajectories. ASEAN's share of global GDP rose steadily to 3.5% in 2024, while Africa's remained more limited at around 2.7%. The divergence is particularly more pronounced in terms of manufacturing value added (MVA). In 1990, Africa and ASEAN each accounted for approximately 1.5% of global manufacturing value added. By 2024, ASEAN's share had more than doubled to around 3.5%, whereas Africa's remained stagnant at around 1.5%.

[1] This brief is based on Han et al. (2025) "Trends and Implications of Major Countries' Expansion into Emerging Manufacturing Bases: Focus on Africa and Southeast Asia."

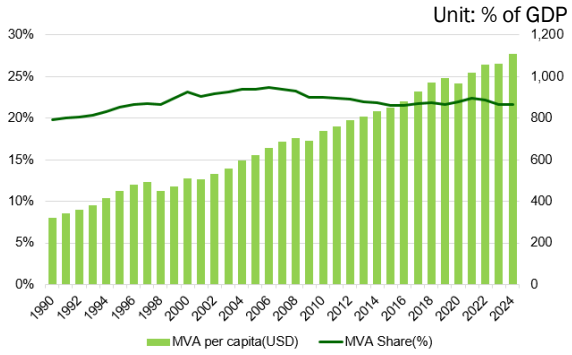
Figure 1. Share of GDP and Manufacturing Value Added to World



Source: UNIDO.

The contrasting role of manufacturing in the two regions is reflected in their economic structures. In 2024, manufacturing value added accounted for 21.7% of ASEAN's GDP, exceeding the global average of 16.5% and approaching the East Asia level of 26.6%.

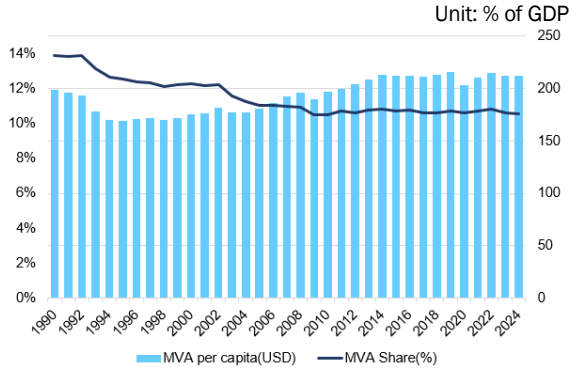
Figure 2. ASEAN's Manufacturing Value Added



Source: UNIDO.

In Africa, manufacturing value added contributed only 10.6% of GDP in 2024, down from 13% in the early 1990s. Among the African countries, many experienced a decline in share of manufacturing value added in GDP since the early 1990s.

Figure 3. Africa Manufacturing Value Added

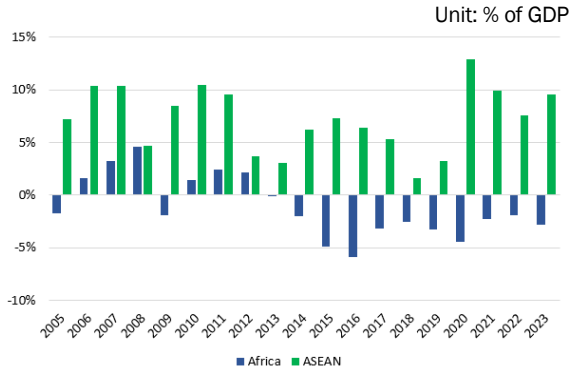


Source: UNIDO.

2. Trade Structure and Export Diversification

The difference in economic structures between Southeast Asia and Africa is clearly evident in their trade patterns. In ASEAN, the total exports have exceeded total imports since 1998, resulting in a trade surplus that has been sustained to date. Africa recorded trade surpluses during parts of the 2000s but its trade balance turned into deficit after 2012.

Figure 4. Trade Balance of Africa and ASEAN

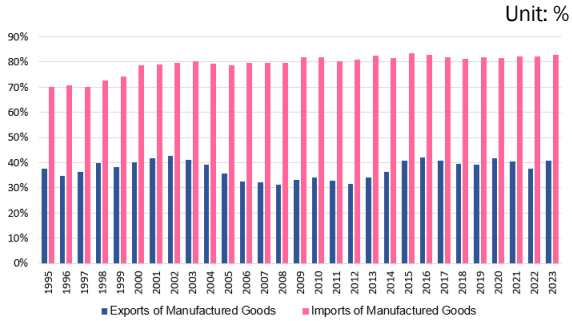


Source: UNIDO

Trade patterns of manufactured goods help explain why Africa has struggled to sustain trade surpluses and why trade deficits have become entrenched since the 2010s. Between 1995 and

2023, manufactured goods account for less than 40% of Africa's exports but more than 80% of its imports. The share of manufactured goods in exports has fluctuated between 31% and 43%. Conversely, the share of manufactured goods in imports rose steadily from 70% in the 1990s to 83% in 2023. This structure limits domestic value addition, weakens export resilience, and contributes to persistent trade deficits.

Figure 5. Africa' Trade of Manufacturing Goods



Source: UNIDO

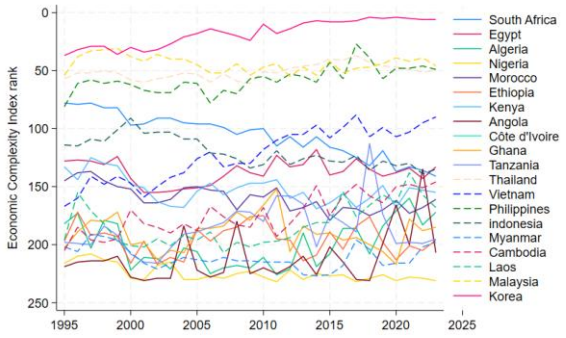
In contrast, the merchandise trade surplus in ASEAN has been supported by high proportion of manufacturing exports. Although imports of manufactured goods exceeded exports in the 1990s, the share of exports first surpassed that of imports in 1999, and has remained higher since 2013. ASEAN has maintained similar shares of manufactured goods in both exports and imports at around 85%. Medium- and high-technology products have remained an important component of the region's export basket.

Figure 6. ASEAN's Trade of Manufactured Goods

Source: UNIDO

Export diversification further illustrates this divergence. Economic Complexity Index (ECI) rankings show that several Southeast Asian countries have improved their productive capabilities over time. Vietnam is especially notable: its integration into electronics and manufacturing value chains has allowed it to improve its position relative to many African economies. By contrast, many African economies remain concentrated in less complex export structures.

Figure 7. ECI Rankings of Selected Countries



Source: The Harvard Growth Lab

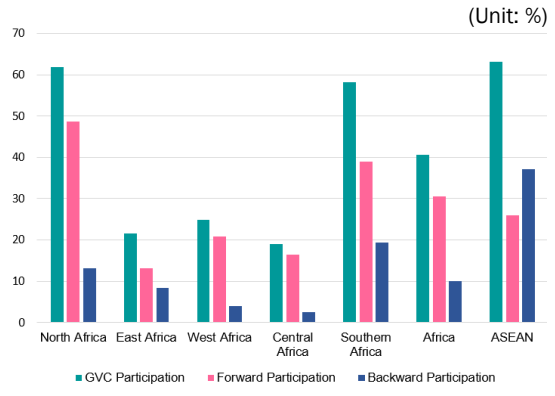
3. Global Value Chain Participation

Global value chain (GVC) participation provides another important lens for comparison. Africa's participation rate stood at 40.6% in

2018, lower than ASEAN's (63.1%). More importantly, the composition of participation differs sharply. Africa's GVC participation is concentrated in forward linkages, reflecting the export of raw materials and intermediate commodities used in downstream production abroad. ASEAN economies, on the other hand, are more deeply integrated through backward linkages, as they import intermediate goods, process or assemble them, and export manufactured products.

North Africa (61.8%) and Southern Africa (58.2%) have relatively higher GVC participation rates than other African subregions, close to ASEAN's level. However, even in these regions, backward participation remains much lower than in ASEAN, at 13.1% for North Africa and 19.4% for Southern Africa. This suggests that Africa's main challenge is not simply the level of GVC participation, but the type and quality of participation.

Figure 8. GVC Participation by Region (2018)



Source: EORA Global Value Chains Database

4. Industrialization Strategies

Despite their different stages of development, Southeast Asia and Africa share common policy goals in their industrialization strategies. Both regions seek to accelerate structural transformation, create high value-added industries, strengthen regional integration, diversify industrial bases, foster sustainable growth, and enhance economic resilience. The ASEAN Community Vision 2045 and AEC Strategic Plan 2026-2030 emphasize the region's vision to become a single market and an advanced manufacturing hub. Similarly, Africa aims to enhance regional integration and expand its manufacturing development through African Union's Agenda 2063 and the AfCFTA.

On the other hands, the two regions differ in their priorities and stage of development. Southeast Asia is focusing on digital transformation and green growth, and transitioning toward higher-value and technology-intensive industries such as semiconductors and electric vehicles. Having adopted distinct strategies, such as Vietnam's semiconductor initiative, Thailand's "Thailand 4.0," and Indonesia's promotion of downstream industry, the region aims to enhance regional integration and strengthen its manufacturing base.

In contrast, African countries remain at an earlier stage of industrialization and continue to prioritize development of labor-intensive manufacturing sectors such as agro-processing, textiles and apparel, light manufacturing, and

mineral beneficiation. At the same time, individual African countries are formulating country-specific industrial strategies suited to their respective conditions.

A comparison of industrialization trajectories reveals that Southeast Asia has built a stable foundation for growth through export-led manufacturing development, whereas Africa has not yet developed a comparable manufacturing base. The export-oriented industrialization model that underpinned Southeast Asia's growth could be relevant for African countries, and understanding this dynamic is crucial for charting Africa's industrial future.

5. Opportunities and Constraints

The African continent possesses important opportunities for industrialization. The most important is demographic change. Africa has the world's youngest population and is expected to account for about one-quarter of the global population by 2050. This creates a large future labor force and an expanding consumer market. Urbanization is another opportunity. As cities grow and the middle class expands, demand for food processing, construction materials, consumer goods, logistics, housing, and services will increase. The African Continental Free Trade Area also creates a major opportunity by linking fragmented national markets. The AfCFTA can help African firms achieve economies of scale, expand intra-African trade, and build regional value chains. Given the small domestic market size of many African economies, regional integration is essential for industrialization. Digital transformation offers additional opportunities to enhance industrial competitiveness. Mobile connectivity, digital payments, e-commerce, and data-based services can reduce transaction costs and improve productivity. Digital technologies can also support manufacturing through logistics management, supply chain coordination, and smart production systems.

Nonetheless, Africa faces a range of internal and external challenges that constrain industrial progress. Domestic obstacles include macroeconomic instability, underdeveloped infrastructure, weak institutional and administrative capacity, unfavorable business environments, political instability, and corruption. Externally, rising protectionism and decline in development assistance further complicate the continent's industrial landscape. Furthermore, green industrialization adds another layer of complexity, presenting both an opportunity and a constraint. Africa has abundant renewable energy potential and critical minerals, but green production requires substantial financial, technical, and regulatory capacity. Without proper supports, climate-related standards could become another barrier to industrial exports.

III. Policy Implications

Africa stands at a critical juncture in its economic development. Despite the emerging opportunities, Africa cannot simply replicate Southeast Asia's industrialization model. During Southeast Asia's rapid industrialization,

globalization was expanding, multinational firms were actively fragmenting production, and advanced economies were more open to imports from developing countries. Today, the global economy has changed, and the environment for late industrialization has become less favorable. Africa, therefore, needs to rethink its industrialization strategy while adapting to the current international landscape. Unlike Southeast Asia's earlier export-led industrialization, Africa's strategy should place greater emphasis on regional market integration, resource-based value addition, and green industrial upgrading.

Industrialization rests on the three pillars of infrastructure, skilled labor, and technology development. Countries seeking to industrialize must tailor their mix of investment, technology adoption, and innovation policies according to their stages of industrial development (World Bank 2024).

For Africa, building a resilient and diversified economic structure will require policies to strengthen the foundations of industrial development, to expand manufacturing investments, and to enhance technological capabilities. First, African countries need to establish the foundational conditions for industrialization by addressing the infrastructure gap, deepening regional integration through the AfCFTA, and setting up and effectively implementing policies that facilitate deeper participation in global and regional value chains. Second, they need to attract greater investments in manufacturing with targeted investment promotion, technology cooperation, and development of industrial clusters and special economic zones (SEZs). Third, African countries need to strengthen their technological capabilities through human capital development, technology transfer, enhanced access to finance, incentives for private-sector research and development activities, and green industrialization in order to improve long-term industrial competitiveness.

1. Establishing Foundations for Industrialization

Africa needs to build competitive manufacturing ecosystems rather than pursue isolated industrial projects, and the urgent task is to improve basic infrastructure. Reliable electricity, transport corridors, logistics systems, and digital infrastructure are essential for reducing production costs and attracting investment. In this regard, the African Union has been making efforts to improve infrastructure with the Program for Infrastructure Development for Africa (PIDA), which aims to enhance continental connectivity.

To meet the massive infrastructure demands, it is necessary to strengthen the institutional foundation to expand public-private partnership. As the burden of debt repayment grew heavier, African governments' fiscal capacity on expenditure for infrastructure has been constrained further. Consequently, the financing gap for infrastructure development in Africa is projected to reach $93.6 billion, equivalent to 1.5% of GDP by 2040. Attracting private capital is essential to resolve the gap. African governments should establish an institutional framework to advance

PPP projects, and transparent bidding and contracting procedures to encourage participation from the private sector.

Africa needs to enhance participation in global value chains, which is stated as a key objective in development strategies at the continental, regional, and national levels across Africa. Industrialization policies can be structured around i) economic integration (trade liberalization, trade agreements), ii) competition promotion (credit market reforms, investment environment improvement, iii) industrial upgrading (R&D and innovation subsidies, support for human capital development), and iv) capacity building (improvements in infrastructure and finance) in order to improve global value chains within the continent (Abreha et al. 2021). Africa's industrial strategy should place greater emphasis on regional value chains. The AfCFTA can support this process by reducing trade barriers, harmonizing standards, and improving customs procedures. Regional production networks in agro-processing, mineral beneficiation and processing, textiles and apparels, pharmaceuticals, construction materials, automotive components, and renewable energy equipment could provide practical entry points.

2. Expanding Investment in Manufacturing

Foreign direct investment plays a critical role in enhancing productivity and strengthening international competitiveness. FDI in the manufacturing sector must be actively attracted in conjunction with the government's mid-to-long-term industrial strategy. Currently FDI into Africa is primarily concentrated in primary industries such as minerals and energy. Between 2015 and 2022, 47% of the greenfield FDI into Africa was invested in renewable and fossil fuels. The share of FDI invested in manufacturing sectors peaked at 30% in 2019 and then declined to around 10%. The experience of Southeast Asian economies, particularly Vietnam, highlights the importance of combining investment promotion with targeted incentives for technology transfer and industrial upgrading.

Maximizing the developmental impact of FDI requires stronger linkages between foreign investors and domestic firms. During the negotiation process for foreign investment, ensuring collaboration between foreign and domestic companies within the target sector will facilitate technology transfer, resulting in enhanced competitiveness of local manufacturing companies.

Special Economic Zones (SEZs) or Industrial Parks serve as important instruments for attracting foreign investment by providing high-quality infrastructure for manufacturing facilities, and business-friendly regulations and environments. Many African countries, including Côte d'Ivoire, Egypt, Ghana, Kenya, and Morocco incorporate plans to establish special economic zones, industrial parks, and free trade zones within their development or industrial strategies. Evidence suggests that establishment of SEZs in Africa has led to improved access to public services, increased consumption

and better residential environments, enhancing the economic well-being of households in nearby areas (Abagna, Hornok, and Mulyukova 2025). However, their success depends on integration with broader national and regional strategies. SEZs should be designed with specific requirements and strategic incentives to offer attractive value to the market, and also to be connected to domestic suppliers, labor markets, training institutions, and transport networks in order to support long-term industrial development.

3. Strengthening Industrial Capabilities

Strengthening industrial capabilities is essential for improving productivity and upgrading value chains. In this regard, Africa needs to address constraints related to access to finance, human capital development, and technology capabilities, which hinder Africa's competitiveness.

Improving access to finance is a critical starting point in Africa, where underdeveloped financial systems remain a major constraint on private-sector development. Given the dominant role of SMEs in African economies, expanding access to finance is critical for industrial development. Recent efforts to leverage digital and mobile technologies for financial inclusion offer promising opportunities to address these constraints.

Human capital development is particularly important as industrial upgrading requires workers with technical skills. Across Africa, the shortage of skilled industrial and technical workers is widely recognized as a major obstacle to industrialization. Industrial workforce development has been identified as a priority at continental, regional, and national levels. Demand is increasingly shifting from basic and secondary education toward technical and vocational education and training (TVET), higher education, and advanced skills development that support industrial transformation in the continent.

Enhancing technology absorption should also be part of Africa's industrialization efforts. FDI can support industrial development, but its benefits depend on the extent to which domestic firms can absorb technology from foreign investors. Supplier development programs, local content policies, joint training schemes, and technology partnerships can facilitate learning and industrial upgrading of local firms.

Creating an environment where research and development activities are actively encouraged is important in technology development. Korea's case provides good lessons in this regard. During its industrialization process, Korea was able to establish a competitive manufacturing sector by investing in higher education, establishing research institutions, and encouraging research and development activities by providing tax incentives for private R&D activities and promoting public-private joint R&D for high-risk projects.

Finally, green industrialization should be integrated into Africa's long-term development strategy. Renewable energy, critical minerals, battery materials, green hydrogen, and climate-resilient infrastructure can create new opportunities for industrial development. However, realizing the opportunities will require substantial investment, technological capabilities, and regulatory supports. Development partners, multilateral development banks, development finance institutions, and private investors will therefore remain important in supporting Africa's green industrial transition.

For Korea and other development partners, the analysis points to an important policy implication. Cooperation with Africa should move beyond traditional aid and place greater emphasis on productive investment, industrial capability building, technology transfer, and regional value chain development. Korea's experience in industrialization, export promotion, infrastructure development, and human capital development offers useful lessons, but cooperation based on these lessons should be tailored to the diverse economic circumstances, institutional capacities, and development priorities across African countries. KIEP