CHAPTER 6

ACCELERATING ECONOMIC TRANSFORMATION THROUGH STRENGTHENING STRUCTURAL POLICIES AND INDUSTRIALIZATION POLICIES

To achieve higher and more resilient economic growth, the transformation of the real sector must continue to be strengthened through structural policies that serve as the foundation for industrialization policies. Strengthening structural policies is pursued through improvements in the investment climate, the creation of healthy business competition, enhancement of infrastructure reliability, as well as the strengthening of trade and investment cooperation. Meanwhile, industrialization policies are directed toward optimizing natural resources to generate higher value-added, strengthen the manufacturing base, and improve external resilience. Industrialization, supported by structural reforms as its foundation, will drive higher economic growth with more evenly distributed benefits, thereby reinforcing national stability.

The national policy mix from both the demand and supply sides is highly strategic in fostering higher and more resilient economic growth. On the demand side, synergy among the Government's fiscal policy, Bank Indonesia's monetary and macroprudential policies, as well as policy coordination within the Financial System Stability Committee (*Komite Stabilitas Sistem Keuangan*—KSSK), needs to be further strengthened to promote growth while maintaining macroeconomic and financial system stability. On the supply side, enhancing economic capacity must continue through increasing value-added across economic sectors. In this regard, real sector transformation through structural and industrialization policies should continuously enhance capital accumulation, labor, and productivity, thereby increasing value-added in production across economic sectors.

The strategy of strengthening structural and industrialization policies constitutes a key element in enhancing economic capacity. Structural policies as a foundation are directed toward improving the investment climate, fostering healthy competition, enhancing connectivity and reliability of infrastructure (both physical and digital), and strengthening trade and investment cooperation. Meanwhile, industrialization policies are aimed at increasing value-added in selected priority economic sectors to promote higher economic growth and large-scale job creation, including through industrialization and downstreaming, particularly those based on natural resources (SDA).

6.1. Conceptual Framework of Structural and Industrialization Policies

Structural policies are a critical aspect of economic transformation toward high-quality and resilient growth. In modern economic literature, structural policies are often defined as a set of policies aimed at fundamentally reforming the economic structure. These policies differ from short-term macroeconomic policies as they focus on long-term systemic changes. In practice, structural policies generally encompass regulatory and governance improvements; enhancement of the business environment; as well as reforms in goods and services markets, labor markets, and the financial system. The IMF (2024) emphasizes that structural reforms can spur productivity, employment, and economic growth, including through lowering entry and exit barriers, enhancing competitiveness, and improving labor market policies.

From a theoretical perspective, structural policies contribute to economic growth by strengthening the supply side through three main channels. These channels consist of (i) improvements in productivity and allocative efficiency of resources; (ii) capital deepening and investment driven by lower costs of doing business and greater availability of financing; and (iii) increased labor force participation and labor quality through improved incentives and mobility in labor markets (Égert, 2017). Reforms in product markets, labor markets, as well as regulatory quality and institutional frameworks act as levers to improve economic incentives, enhance efficiency, and strengthen competitiveness.

These three channels, in turn, can accelerate long-term economic growth through increases in production factors. Regulatory reforms, improvements in the investment climate, and reforms in goods and services markets, labor markets, and financial markets attract investment, thereby increasing capital accumulation, production capacity, and employment absorption. In addition, structural policies that enhance the quality of human resources (SDM) improve labor quality. Structural policies also play a critical role in fostering technological progress, thereby increasing total factor productivity (TFP).

Industrialization policy refers to policies pursued by a country to strengthen its domestic economic structure through the development of the industrial sector. In theory, industrialization contributes to economic growth through structural changes that expand economic capacity. Increased adoption of technology in the industrial sector raises productivity through process efficiency, quality improvements, and cost reductions. Industrialization, which marks a shift from traditional to modern sectors, also promotes job creation—from factory construction and operations to multiplier effects in supporting sectors. In addition, industrialization drives capital stock accumulation, as it requires substantial investment.

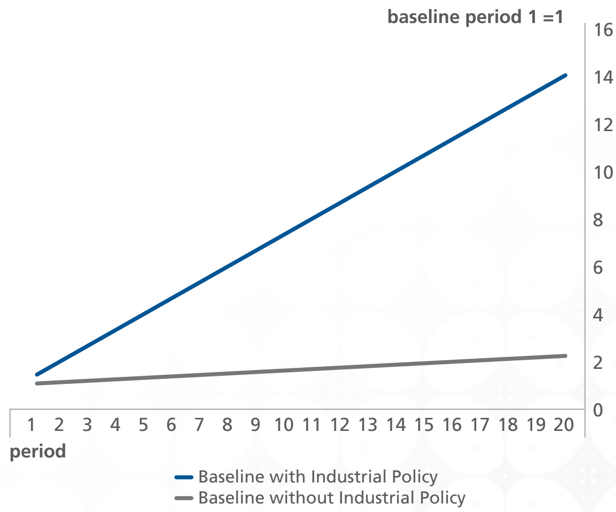
Industrialization is a prerequisite for economic development before entering the high-growth, "take-off" phase. Rostow (1960) emphasized that before entering the take-off stage, countries must undergo fundamental changes characterized by a shift from agricultural dominance toward industrial activities. This transformation includes agricultural modernization, productivity improvements, and the reallocation of resources toward non-agricultural activities, including manufacturing industries.

Industrialization policy is often implemented through Government policy instruments oriented towards enhancing the role of the industrial sector. The IMF (2025) classifies industrial policy instruments into three categories: subsidized financing, direct support, and other policy instruments. Subsidized financing is generally directed at easing financing constraints in certain sectors, including through interest subsidies, guarantees, and concessional loans. Direct support is provided in the form of transfers such as grants and direct funding assistance to stimulate investment, innovation, and production capacity expansion. In addition to these instruments, industrial policy often takes the form of protectionist measures, such as tariffs and non-tariff barriers, aimed at protecting and developing domestic industries (Aiyar et al., 2025; Criscuolo et al., 2022).

The motivation for industrialization policies stems from the need to address market failures and strengthen the competitiveness of potentially strong domestic sectors that are not yet globally competitive. The OECD (2024) and IMF (2024) highlight that market mechanisms often fail to allocate resources toward high value-added sectors due to learning-by-doing externalities in the development of infant industries, limited availability of long-term financing for high-risk sectors, and coordination failures across investment activities. For example, markets have been inadequate in fostering investment in advanced technology sectors such as semiconductors and renewable energy due to high risks and upfront costs (IMF, 2024). However, the benefits of industrial policies in enhancing production capacity are accompanied by increased fiscal and inflationary risks. IMF simulations (2025) show that scenarios involving industrial policy interventions in the form of a 10% production subsidy and a 12% tariff on strategic sectors increase production volumes and reduce production costs (Graphs 6.1. and 6.2.). Aggregate TFP rises with positive spillovers to other sectors, albeit at a substantial fiscal cost of approximately 5.5% of GDP annually in the form of subsidies. In the short-term, industrialization also leads to higher consumer prices, driven by increased demand for raw materials, energy, and labor.

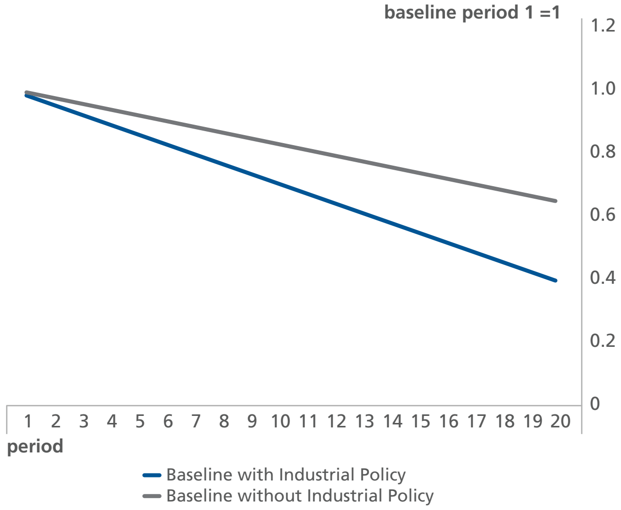
Industrialization policies also face several challenges that warrant close attention. *First*, rising social and economic inequality during the early stages of transition. While industrialization can boost economic growth and welfare, the benefits may not be evenly distributed, leading to higher inequality, which eventually declines

Graph 6.1. Simulation Illustration of the Impact of Industrial Policy on Domestic Production Volume



Source: IMF Simulations (2025), processed

Graph 6.2. Simulation Illustration of the Impact of Industrial Policy on Production Costs



Source: IMF Simulations (2025), processed

after reaching a turning point consistent with Kuznetsian dynamics (Ansari, 2023). *Second*, environmental impacts include depletion of natural resources, environmental degradation, and increased waste and pollution. Negative externalities may arise when industries pursue profits without regard to ecological consequences. Nevertheless, such impacts follow an inverted-U curve (Azam et al., 2024), where the turning point can be reached more quickly through stronger regulation and the adoption of clean technologies. *Third*, dependence on fossil-based energy, necessitating the parallel development of new and renewable energy sources. *Fourth*, rapid technological advancement, where automation reduces labor demand. High-tech industrial processes require skilled labor that may not be readily available domestically, while limited technology transfer can create external dependence. *Fifth*, policy consistency and strong governance. The success of industrialization in South Korea and China has been supported by long-term policy consistency and well-governed, disciplined institutions.

Accordingly, industrialization policies must be accompanied by the fulfillment of several key prerequisites to ensure effective economic transformation. *First*, appropriate policy design is essential; industrial policy should not be broad-based but targeted toward sectors with high spillover effects and increasing returns to scale, supported by a long-term industrialization roadmap. *Second*, structural policy support as a foundation through improved institutional quality, strong governance, policy integrity, and effective inter-agency and inter-authority coordination. *Third*, maintaining macroeconomic and financial system stability to create a conducive environment for long-term industrial investment. *Fourth*, active private sector participation as the main industrial actor and largest source of financing. *Fifth*, complementary policies in education, innovation, and infrastructure. Without these prerequisites, industrial policies risk inefficient resource allocation and uncontrollable fiscal burdens, thereby diminishing medium-to-long-term growth and transformation benefits.

Industrialization remains a primary strategy for economic development in many countries, including Indonesia. Bappenas (2024) underscores that industrialization constitutes a *"game changer"* and a mandatory stage of transformation that Indonesia must undergo to achieve higher economic growth. The manufacturing sector has also been proven to be the most effective growth engine compared with other sectors, given its strong multiplier effects on the broader economy. Industrialization is further capable of generating substantial employment opportunities, particularly in anticipation of the demographic dividend, while simultaneously attracting new investment inflows. By increasing product value-added, industrialization supports improvements in the economic structure and reduces dependence on imported industrial inputs and technology-intensive goods. Industrialization is also crucial for the transition toward a modern economy and a green energy ecosystem. For example, without a strong industrial base, a country would not be able to produce solar panels, electric vehicle (EV) batteries, and wind turbines, nor develop decarbonization technologies. Moreover, industrialization reduces reliance on a commodity-based natural resource economy that is highly vulnerable to global price volatility.

Successful industrialization, supported by structural reforms as its foundation, promotes higher economic growth with more evenly distributed benefits, thereby reinforcing national stability. The impact of structural and industrialization policies is aligned with the concept of *Sumitronomics*,[18] which emphasizes three key pillars: high economic growth, equitable distribution of development benefits, and dynamic national stability. Industrialization positions the industrial sector as an aggressive engine of economic growth while simultaneously reducing import dependence through product diversification. This is consistent with the *Sumitronomics* vision of high economic growth and national self-reliance. Furthermore, the spatial dispersion of industrial activities across regions ensures that the benefits of industrialization are shared more broadly across society, in line with the pillar of equitable development benefits under *Sumitronomics*. The third pillar of *Sumitronomics* further implies that industrialization can only be successful if national stability is well maintained.

Based on the foregoing discussion, downstreaming policies constitute an integral component of industrial policy that reflects the concept of dynamic comparative advantage. Essentially, downstreaming represents a form of industrialization that transforms raw materials or primary commodities into intermediate or final products with higher value-added. This policy underscores the role of the Government in encouraging more efficient and sustainable expansion of production capacity in products with competitive advantages (Rodrik, 2004). Improvements in production efficiency are enabled through the adoption of continuously advancing technologies, investment in education and human capital quality enhancement, as well as the more efficient utilization of production resources (Redding, 1999).

18 Sumitronomics is a development-oriented economic framework derived from the economic thinking of Prof. Sumitro Djojohadikusumo, one of Indonesia's founding economists. The term is short for Sumitro Economics and has recently been re-articulated as a strategic reference for Indonesia's medium-to-long-term development agenda.

6.2. Indonesia's Structural Policies

Strong structural policies constitute the foundation for successful and sustainable industrialization. The IMF (2024) underscores that structural policies are at the core of the medium-term strategies of industrialized economies. In this context, structural policies provide the basis for enhancing production capacity, reducing market distortions, strengthening industrial efficiency, and supporting long-term economic transformation. Baquie et al. (2025) further emphasize that structural policies reinforce the linkage between industrialization policies and overall economic performance. The role of structural policies is also highlighted by Ciminelli et al. (2019), who demonstrate that the simultaneous implementation of structural reforms across regulatory dimensions—such as trade tariffs, domestic finance related to regulation and supervision, external finance related to capital account openness, labor market aspects including employment protection, and competitiveness—can increase medium-term annual economic growth.

Indonesia's investment climate and competitiveness have continued to improve, although there remains room for further strengthening. *Indonesia's Business Ready (B-Ready) Index* reached a score of 63 out of 100 in 2024 (World Bank, 2024). Relatively strong performance was recorded in labor, utilities, and business location indicators, in line with the implementation of regulatory reforms, risk-based licensing, and the strengthening of basic infrastructure. Meanwhile, according to the *IMD World Competitiveness Yearbook* (IMD, 2025), Indonesia's competitiveness ranking stood at 40th out of 69 countries globally (Graph 6.3.), outperforming India, Italy, the Philippines, Brazil, South Africa, and Türkiye. Improvements in Indonesia's competitiveness were supported by progress in the pillars of economic performance, business efficiency, and domestic market dynamism, underpinned by macroeconomic stability, business licensing reforms, and increased

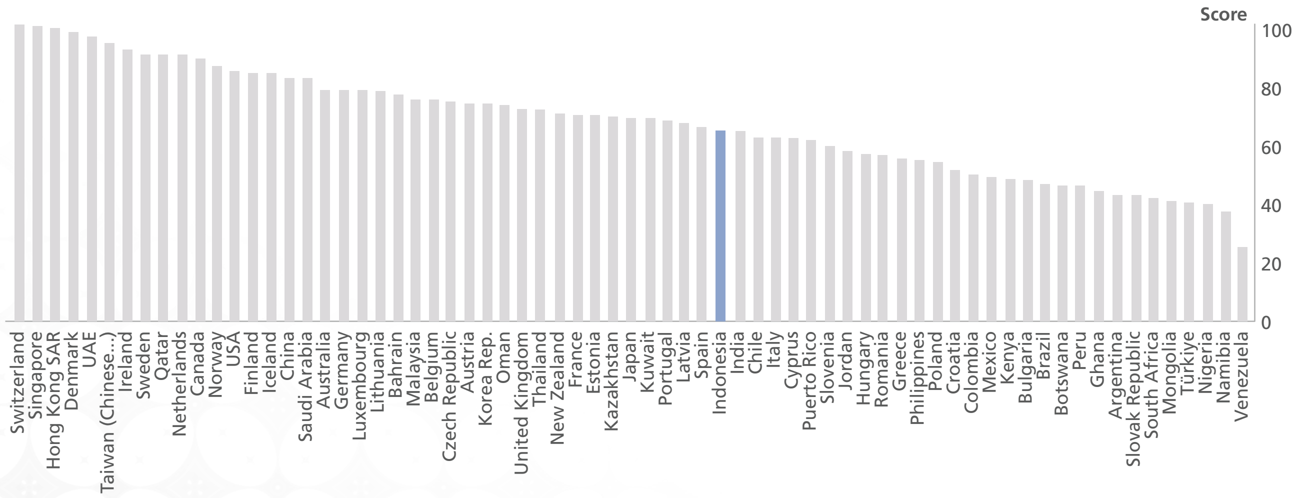
Structural policies as the foundation for downstreaming policies are directed toward improving the investment climate, promoting fair competition, strengthening infrastructure connectivity, and enhancing trade and investment cooperation

investment realization. In addition, Indonesia's Corruption Perception Index (CPI) improved from 34 in 2023 to 37 in 2024, reflecting a more favorable perception of anti-corruption efforts and supporting improvements in the investment climate.

Structural policies are directed toward improving the investment climate, fostering healthy business competition, strengthening infrastructure connectivity, and enhancing trade and investment policies to support successful industrialization. Deléchat et al. (2024) emphasize the importance of structural policies in underpinning the effectiveness of industrialization policies. More broadly, structural policies are also designed to address various constraints on economic growth and productivity, similar to industrial policies. The key distinction lies in their scope: structural policies are economy-wide, while industrial policies are typically targeted at selected priority sectors.

Improvements in the national investment climate are pursued through integrated policy breakthroughs aimed at enhancing business certainty and fostering healthy competition. The Government has implemented regulatory harmonization and simplification across sectors, most notably through the revision of dozens of laws under the Job Creation Law (*Undang-Undang Cipta Kerja*) to enhance licensing efficiency. A risk-based approach to business licensing has been introduced, simplifying licensing procedures according to business risk levels—allowing low-risk businesses to commence operations more quickly while ensuring proportionate supervision for higher-risk activities. Institutionally, investment licensing authority has been centralized under the Ministry of Investment/Indonesia Investment Coordinating Board (BKPM) and operationalized via the integrated Online Single Submission (OSS) system, supported by service level agreements (SLA) and the positive fictitious *(fiktif positif)* approval mechanism. In addition, fiscal incentives such as reductions in the corporate income tax (CIT) rate have been provided to enhance investment attractiveness. These measures are aligned with the business environment reform roadmap established in 2021 and collectively

Graph 6.3. Global Competitiveness Ranking



Source: IMD WCY (2025)

reflect the Government's commitment to creating a more conducive, transparent, and competitive investment climate to support job creation and sustainable economic growth.

Structural reforms in investment policy also include the re-arrangement of foreign direct investment (FDI) regulations to enhance business certainty while safeguarding investment quality. In line with Minister of Investment and Downstreaming/Head of BKPM Regulation No. 5 of 2025, FDI governance includes the establishment of a minimum investment value of IDR 10 billion. In addition, a minimum paid-in and subscribed capital requirement of IDR 2.5 billion is stipulated to strengthen investor commitment, accompanied by more flexible provisions regarding the use of funds for operational purposes. Differential treatment is also provided for specific sectors, including property, accommodation, and natural resource-based sectors. Overall, these FDI regulations reflect the Government's structural reform agenda to foster a more transparent, proportional, and productivity-oriented investment climate, aligned with regulatory simplification, risk-based licensing, and strengthened governance in order to support economic transformation and sustainable growth.

Structural reforms aimed at fostering healthy competition enhance efficiency, promote innovation, reduce economic costs, and improve resource allocation. The Government, in collaboration with the Business Competition Supervisory Commission (*Komisi Pengawas Persaingan Usaha*–KPPU), has undertaken modernization of competition policies to strengthen national competitiveness. These efforts include updating competition regulations in line with the digital economy, harmonizing cross-sectoral policies, enhancing the institutional capacity of competition law enforcement agencies, and integrating technology into competition monitoring and enforcement mechanisms.

Structural reforms through the strengthening of physical and digital infrastructure connectivity are critical in supporting economic transformation, equitable development, and national competitiveness. Physical connectivity is essential for accelerating access to public services and fostering inter-regional economic integration. The Government remains committed to developing modern, efficient, and affordable physical connectivity, encompassing the integration of land, sea, air, and rail transport modes, reducing logistics cost disparities between western and eastern regions, and improving the national Logistics Performance Index (LPI). Connectivity enhancement and regional development initiatives form part of the National Strategic Projects (PSN). Infrastructure provision is also extended to remote areas in line with the Sumitronomics concept, which emphasizes equitable distribution of development benefits. On the digital front, the Government has expanded broadband access through the construction of Base Transceiver Stations (BTS) and fiber-optic networks and has issued the National Digital Infrastructure Roadmap 2025 to guide future development. All of these initiatives require strong infrastructure governance.

The Government has strengthened structural policies through the provision of more competitive, targeted, and transparent fiscal incentive packages to enhance investment attractiveness and accelerate real sector transformation. These incentives are administered through a one-stop integrated process at the Ministry of Investment and Downstreaming/BKPM and include key schemes such as tax holiday, tax allowance, import duty exemptions, and super tax deduction. Under the tax holiday scheme, corporate income tax reductions of up to 100% are granted for large-scale investments and pioneer industries for a specified period, alongside a mini tax holiday for medium-scale investments. The tax allowance provides reductions in taxable income, accelerated depreciation and amortization, lower dividend tax rates, and extended loss carry-forward periods, particularly for priority sectors and regions. Import duty exemptions for machinery, goods, and raw materials are provided to reduce initial investment costs and support capacity expansion. Meanwhile, super-tax deduction incentives are designed to stimulate strategic activities such as vocational education, research and development (R&D), and labor-intensive industries. Collectively, these incentives form part of the Government's structural reform agenda to lower the cost of doing business, improve investment quality and productivity, and maintain healthy competition, thereby strengthening national economic competitiveness over the medium- to long-term.

Structural reforms through improvements in human capital quality serve as a robust foundation for economic transformation. Over the 2025–2029 medium-term, the Government, under National Priority (PN) 4, is committed to strengthening Indonesia's human capital development. Key policy directions include accelerating the 13-year compulsory education program, enhancing teaching and learning quality, strengthening education governance systems, expanding access to high-quality higher education and Science, Technology, Engineering, Arts, and Mathematics (STEAM), and fostering a culture of literacy to promote creativity and innovation. In addition, the Government is strengthening vocational education and training and the labor market ecosystem to create a conducive employment environment that supports improved labor quality and productivity, including greater participation of women in the workforce.

Structural reform policies are further reinforced through enhanced domestic and international trade and investment cooperation. The Government promotes a collaborative pentahelix approach that integrates the roles of Government, the business sector, academia, communities, and the media to encourage high-quality and sustainable investment realization (Figure 6.1.). Through clear policy direction and investment diplomacy strategies, the Government ensures legal certainty and a conducive business environment. International business collaboration is oriented toward downstreaming, innovation, and job creation as tangible outcomes of cross-border investment partnerships. Academia contributes research-based inputs and strengthens human capital capacity, while communities help ensure that investment delivers inclusive welfare and local empowerment. The media plays a role in enhancing transparency, public communication, and Indonesia's positive image as a competitive investment destination. Pentahelix approach is complemented by facilitation strategies such as right-to-match mechanisms, investor forums, and optimization of international cooperation platforms, reflecting the Government's commitment to building a coordinated, adaptive, and quality-oriented international cooperation ecosystem as part of structural reform and national economic transformation.

Government programs under the National Strategic Projects (PSN) framework can be interpreted as structural policies supporting long-term economic transformation. Productivity enhancement is pursued through 79 PSN focused on connectivity infrastructure and economic zone development. Meanwhile, 142 PSN are aimed at strengthening the economic structure through increased capital accumulation, including 90 projects related to housing, water resources, energy, and food; 21 projects related to energy programs and swamp rice land development; and 52 PSN related to business development, downstreaming, and industrialization. From a labor perspective, seven projects are dedicated to human capital strengthening, four of which constitute Presidential directives: the free nutritious meal program, people's school development, education digitalization, and welfare card programs.

6.3. Indonesia's Industrialization Policy

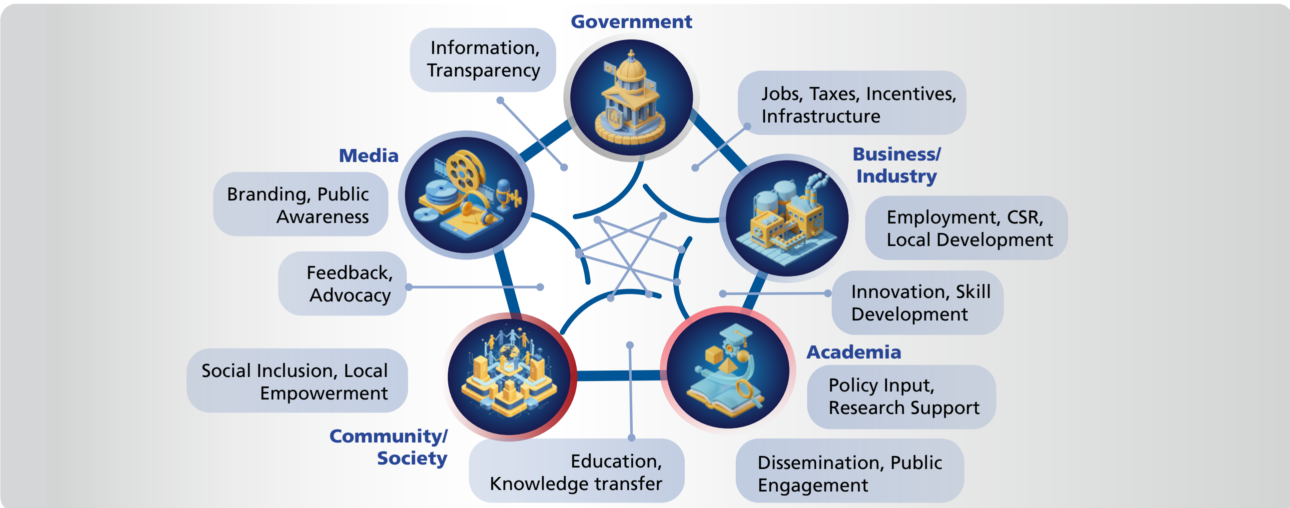
6.3.1. Developments in Global Industrialization Policies

In line with rising of global uncertainty, industrialization policies have once again been adopted by many countries. Going forward, the global economy will face a number of challenges, including slowing economic growth amid widening fragmentation across countries. This slowdown has been driven by heightened global uncertainty following the implementation of unilateral tariff policies by the US Government and persistent geopolitical tensions. US tariff policies have contributed to declining global trade volumes and exacerbated disruptions in global supply chains. At the same time, global disinflation is expected to be constrained by the impact of US tariffs and persistently elevated non-oil commodity prices. These conditions will limit the scope for monetary policy rate cuts to further stimulate domestic growth. Consequently, economic growth will increasingly depend on the implementation of structural reform and industrial policies to activate the real sector. This trend is reflected in the rise of new industrial policy interventions, particularly in the post-COVID-19 pandemic period (Graph 6.4.).

The number of countries implementing industrialization policies to strengthen economic resilience and promote growth continues to rise, particularly among advanced economies such as the US, the European Union, and Canada, as well as several emerging economies, including China. The post-pandemic period has marked a paradigm shift from a development approach relying solely on market mechanisms toward a more active role of the state in shaping medium- to long-term economic structures. Modern industrial policies are no longer limited to trade protection or import substitution but also encompass targeted fiscal incentives, long-term financing support, government procurement policies, and facilitation of research and development (R&D).

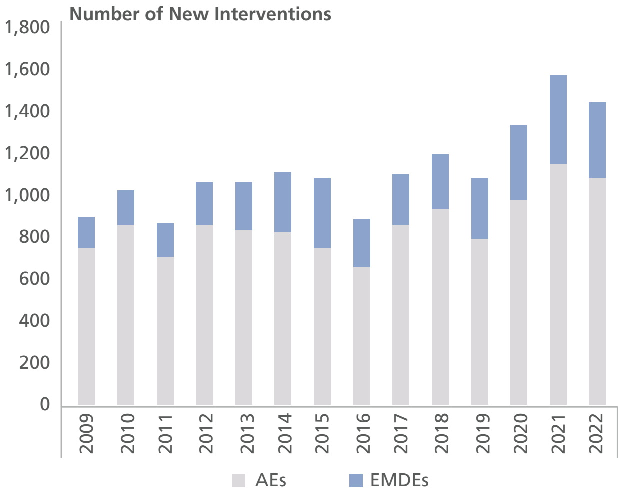
The primary motivation for adopting industrialization policies is to enhance the global competitiveness of domestic products through subsidies and direct support instruments. This motivation is prevalent across both advanced economies and Emerging Market and Developing Economies (EMDEs). Other considerations, such as climate mitigation and strengthening global value chain resilience, are more dominant among advanced economies (Graph 6.5.). In terms of sectoral focus, advanced economies tend to prioritize high-technology manufacturing,

Figure 6.1. Pentahelix Model to Strengthen International Cooperation



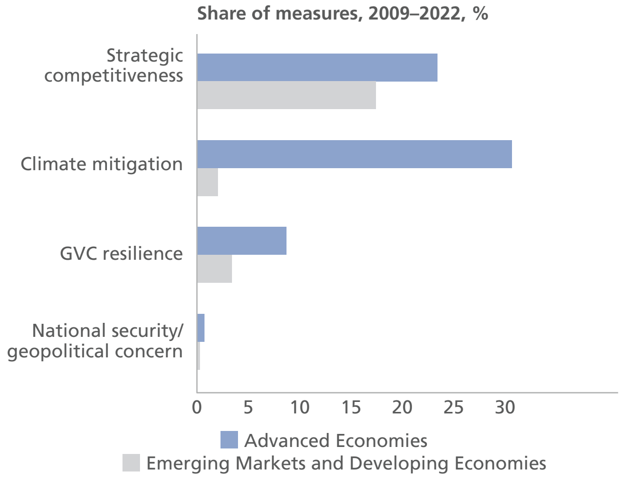
Source: BKPM

Graph 6.4. Increase in Global Industrial Policy Interventions



Source: WEO IMF, October 2025, processed

Graph 6.5. Motivation for Global Industrialization Policies



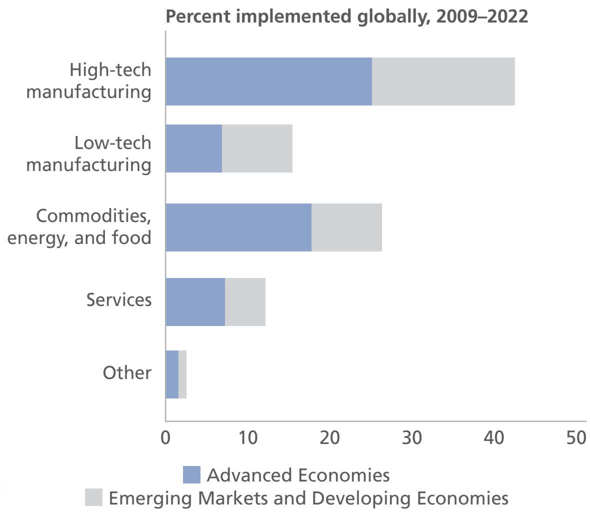
Source: WEO IMF, October 2025, processed

commodities, energy, food, and services sectors. In developing economies, industrial policy priorities are more diverse—ranging from high-tech manufacturing and commodities to energy, food, and services—depending on technological readiness and natural resource endowments (Graph 6.6.). By instrument, the IMF (2025) notes that during 2009–2022, subsidized financing and direct support accounted for more than 80% of industrial policy interventions globally, both in advanced economies and emerging market economies (Graph 6.7.).

For Indonesia and the ASEAN region, global industrial policy dynamics present opportunities to strengthen positions within global value chains. Increased cross-border production relocation and investment driven by geo-economic fragmentation and friend-shoring strategies create opportunities to strengthen domestic manufacturing bases and attract investment in green technology and electric vehicle (EV) sectors. However, these opportunities are accompanied by risks, including heightened capital flow volatility, external pressures on exchange rates, and potential widening of current account deficits if industrial policies are not well coordinated and effectively implemented.

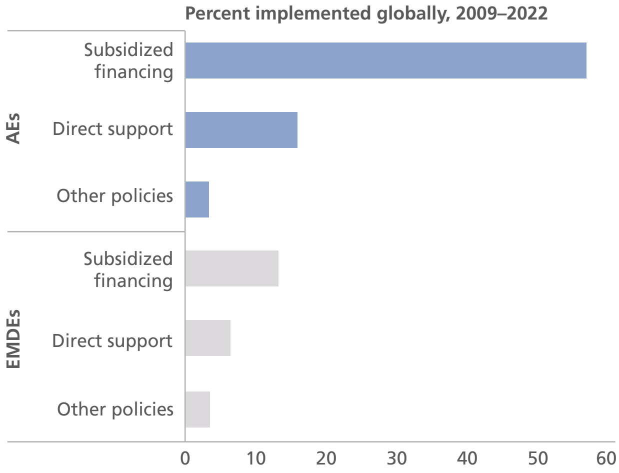
The success of industrialization policies varies across countries, influenced by country-specific characteristics and industrialization models. South Korea's industrialization succeeded due to a clear long-term vision, close coordination between the Government and the private sector, and a strong focus on technological and human capital development. China demonstrates the role of long-term planning and large-scale state support in accelerating technology diffusion, albeit with challenges such as overcapacity risks and trade tensions. Conversely, Brazil's experience illustrates that protectionism without strong oversight and performance discipline can result in

Graph 6.6. Priority Sectors of Global Industrialization Policies



Source: WEO IMF, October 2025, processed

Graph 6.7. Global Industrial Policy Interventions by Instrument



Source: WEO IMF, October 2025, processed

subsidy dependence, distortions, and weakened competitiveness. These international experiences provide valuable lessons for designing Indonesia's industrial policy framework.

South Korea's experience illustrates how well-designed industrial policies can drive real sector transformation. Since the 1970s, the South Korean Government has implemented large-scale industrialization policies to promote structural transformation in strategic sectors. These policies were implemented gradually in line with technological and capacity development. The Korean industrialization model was based on partnerships between the state and private conglomerates (*chaebol*), with *chaebol* acting as lead firms aligned with the Government's long-term vision. Government support included industrial planning, targeted financing, performance-based fiscal incentives with clear targets, and export-oriented productivity enhancement. Domestic market protection served as an incubation mechanism for early-stage industries, complemented by selective protection for strategic sectors. Industrialization was further supported by directed financing toward priority sectors with close coordination between the Government and monetary authorities.

South Korea's industrialization was underpinned by strong structural policies. The Government implemented industrial policies consistently over the long-term and conducted rigorous evaluations, terminating subsidies and incentives for non-productive sectors. For example, the government provides support to more than one company in the automotive sector, however in its development, the Hyundai company has become dominant. South Korea's significant investment in R&D—exceeding 5% of GDP—played a key role in closing technological gaps through learning-by-doing and reverse engineering. Strong governance and complementary policies, including anti-corruption campaigns, industrial estate development, capital goods import facilitation, skilled labor education, and agrarian reform, further supported success. These factors enabled sustained productivity and export growth, positioning South Korea as one of the most successful industrialization cases among developing economies.

China has implemented industrialization policies on a much larger scale and intensity through long-term planning and strong state support. Since the early stages of economic reform, China has integrated industrialization strategies into national development plans, prioritizing manufacturing and strategic technologies such as electric vehicles (EVs), solar panels, and semiconductors. These policies involved massive investment, fiscal incentives, and low-cost financing, supported by gradual integration into global markets. Export orientation and active participation in international value chains accelerated structural transformation, making China a global manufacturing hub. Supporting ecosystems were developed through industrial zones, logistics infrastructure, and public procurement policies to encourage domestic demand. China also built an integrated R&D ecosystem linking academia and industry, pursued aggressive technology transfer, supported by a mutually supportive financing ecosystem of the government and financial institutions as well as innovative financing schemes. The government also protects the domestic market along with expanding the supply of raw materials and global marketing, as well as protecting technology exports. While fiscal risks and market discipline require careful management, China has successfully increased technological competitiveness and strengthened its position in the global supply chain, while also highlighting the importance of long-term planning and industry policy integration with national development agenda.

In contrast, the unsuccessful implementation of industrial policies in Brazil provides important lessons on the limitations of import-substitution-based industrialization. Brazil's industrialization strategy relied heavily on high protection for domestic industries and state-owned enterprises as the primary policy instruments, with the objective of reducing import dependence and promoting manufacturing growth. In its early stages, this strategy temporarily expanded production capacity; however, its narrow domestic market orientation constrained economies of scale and limited integration with global markets. The absence of performance-based evaluation mechanisms and policy discipline resulted in the continued provision of state support despite persistently low productivity, leading to fiscal subsidy dependence and increased budgetary pressures. At the same time, private sector R&D investment remained relatively low, with manufacturing research yielding success in only a limited number of sectors and lacking sufficient integration with market needs. Moreover, weak governance and policy oversight as part of structural policies generated price distortions and resource misallocation. Over the long-term, this strategy failed to strengthen competitiveness and external resilience, and contributed to external debt crises during the 1980s. Brazil's experience underscores that overly protectionist industrialization policies, in the absence of performance-based incentives and safeguard mechanisms, carry significant risks of subsidy dependency and structural competitiveness erosion (Table 6.1.).

6.3.2. Developments in Indonesia's Industrialization Policy

Indonesia's industrialization policy has evolved from import substitution toward value-added enhancement and manufacturing base strengthening. Historically, downstreaming policies developed gradually and shifted in orientation in line with domestic and global economic dynamics. During the early post-independence and New Order periods, industrial policy was dominated by import substitution, while natural resource-based exports served primarily as raw material suppliers

Table 6.1. Industrial Policies of South Korea, China, and Brazil

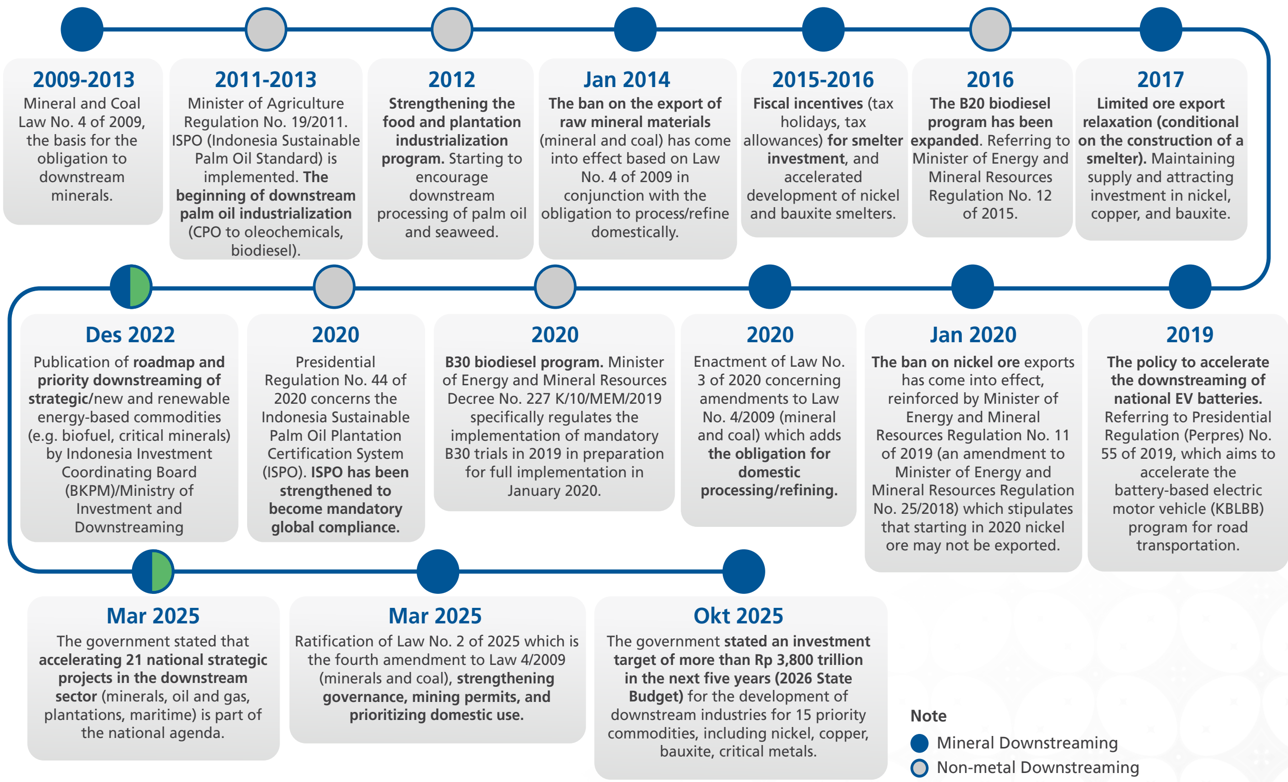
Aspect	South Korea	China	Brazil
Main strategies in industrialization	Export based industrialization	Hybrid: import substitution in the initial stage, followed by export orientation and global value chain integration	Industrialization to substitute imported products
Target market	Focuses on global markets to drive economies of scale	Focuses on the very large domestic market and global market	Focuses on the domestic market, which is relatively limited
Business entity ownership structure	Dominated by the private sector, government support is given to export-based companies	A mix of state-owned, semi-state-owned enterprises, and large private companies, but the role of the state dominates	Depends on government-owned enterprises and multinational companies
Learning & Discipline	Encourage the application, mastery, and redevelopment of foreign technology	Aggressive in absorbing, imitating, and upgrading foreign technology	Limited technology absorption and redevelopment
Quality of industrial policy implementation	Strong governance, complementary policies and discipline	Governance of industrialization policy, although discipline is not as strict as South Korea, but policy implementation is very fast	The lack of governance of industrialization policies results in the positive impact of policies being suboptimal
Outcome	Successfully utilized the global value chain and become a high-income country	Successfully carried out industrial upgrading and became a global manufacturing hub, but is still in the upper-middle income country zone	Still stuck in the middle-income trap

Source: WEO IMF, October 2025

and foreign exchange earners with limited downstreaming. From the 1980s to the early 2000s, policy orientation shifted toward primary commodity-based exports alongside trade and investment liberalization, however, reinforcing dependence on raw material exports. A major turning point occurred with Law No. 4 of 2009 on Mineral and Coal Mining, which mandated domestic processing and refining to increase value-added. Since then, downstreaming, particularly in the mining sector, has been positioned as an instrument to increase state revenue, improve terms of trade, and attract investment in the processing industry. This was followed by the nickel ore export ban in January 2020, through the Minister of Energy and Mineral Resources Regulation Number 11 of 2019 concerning Mineral and Coal Mining Business, marking a decisive step in positioning downstreaming as a core instrument of structural economic transformation. Over time, downstreaming expanded beyond mining to include agriculture and food sectors, and became closely linked to manufacturing strengthening, job creation, productivity enhancement, and external resilience (Figure 6.2.).

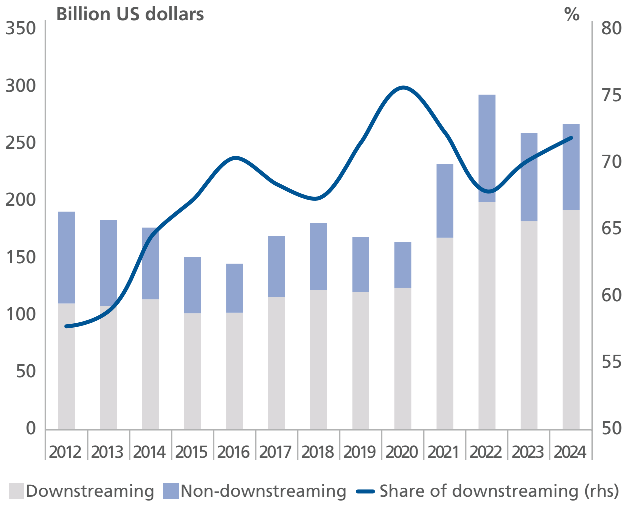
Industrialization, through strengthened downstreaming, has not only increased export value-added but also enhanced investment attractiveness in manufacturing. Over the past decade, the share of processed products in Indonesia's export structure rose from 67.14% in 2014 to 71.80% in 2024 (Graph 6.8.). This reflects the growing contribution of manufacturing to export performance and the positive impact of structural transformation towards increasing export competitiveness and resilience. Investment related to downstreaming during 2024 through Q3-2025 reached Rp839.2 trillion, or 26.7% of total domestic and foreign investment, significantly higher than Rp375.4 trillion or 26.5% in 2023 (Table 6.2.). This underscores Indonesia's increasing attractiveness as a value-added manufacturing investment destination, while emphasizing the role of downstreaming as a catalyst in shifting investment patterns from the extractive sector to the productive sector based on processing and accelerating the transformation of the national economic structure.

Figure 6.2. The Development of Indonesia's Downstreaming



Source: Bank Indonesia, processed from various sources

Graph 6.8. Contribution of Industrialization to National Exports



Source: WITS

Despite progress, downstreaming can be further strengthened as a foundation for future economic transformation. First, while downstreaming has improved export performance—particularly in basic metals—it remains concentrated in intermediate products, with continued reliance on imports of certain derivative products, such as tin and copper. Second, downstreaming has boosted investment, including FDI, but export-oriented production often remains vulnerable to external shocks. Third, employment absorption has increased, yet human capital quality and R&D capacity remain limited, as reflected in Indonesia's relatively low global innovation index ranking (Graph 6.9.).

6.3.3. Strengthening Indonesia's Industrialization Policy

Achieving the vision of Golden Indonesia requires real sector transformation through structural reform and industrialization policies. The first phase of transformation (2025–2029)

Table 6.2. Contribution of Industrialization to National Investment

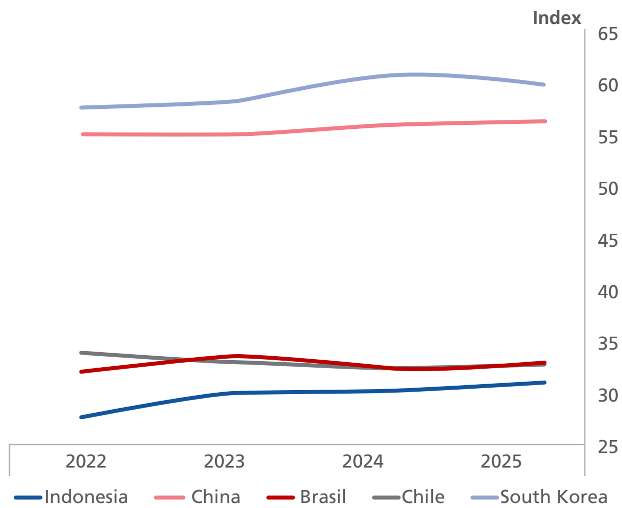
Sector	Investment (Rp trillion)	
	2023	2024 – Q3 2025
Downstreaming sectors	375.4 (26.5%)	839.2 (26.7%)
Non-downstreaming sectors	1,043.5 (73.5%)	2,309.3 (73.3%)
Total	1,418.9 (100%)	3,148.5 (100%)

Source: BKPM, calculated

focuses on strengthening downstreaming of natural resources, research, innovation, and labor productivity (Figure 6.3.). The 2025–2029 National Medium-Term Development Plan (RPJMN) identifies downstreaming and natural resource-based industrial development as National Priority 5 of 8 National Priorities. It aimed at building a high value-added, regionally integrated, and globally competitive industrial foundation, thereby acting as a key driver of regional and national economic growth. Accordingly, medium-term industrialization policies are directed toward: (i) the development of downstreaming in priority natural resource-based industries; skilled labor-intensive industries; innovation- and technology-intensive industries; as well as export-oriented industries; (ii) the development of industrial agglomerations in priority Industrial Estates (KI) and Special Economic Zones (KEK) as new growth centers; (iii) the optimization of the backbone of economic integration and the

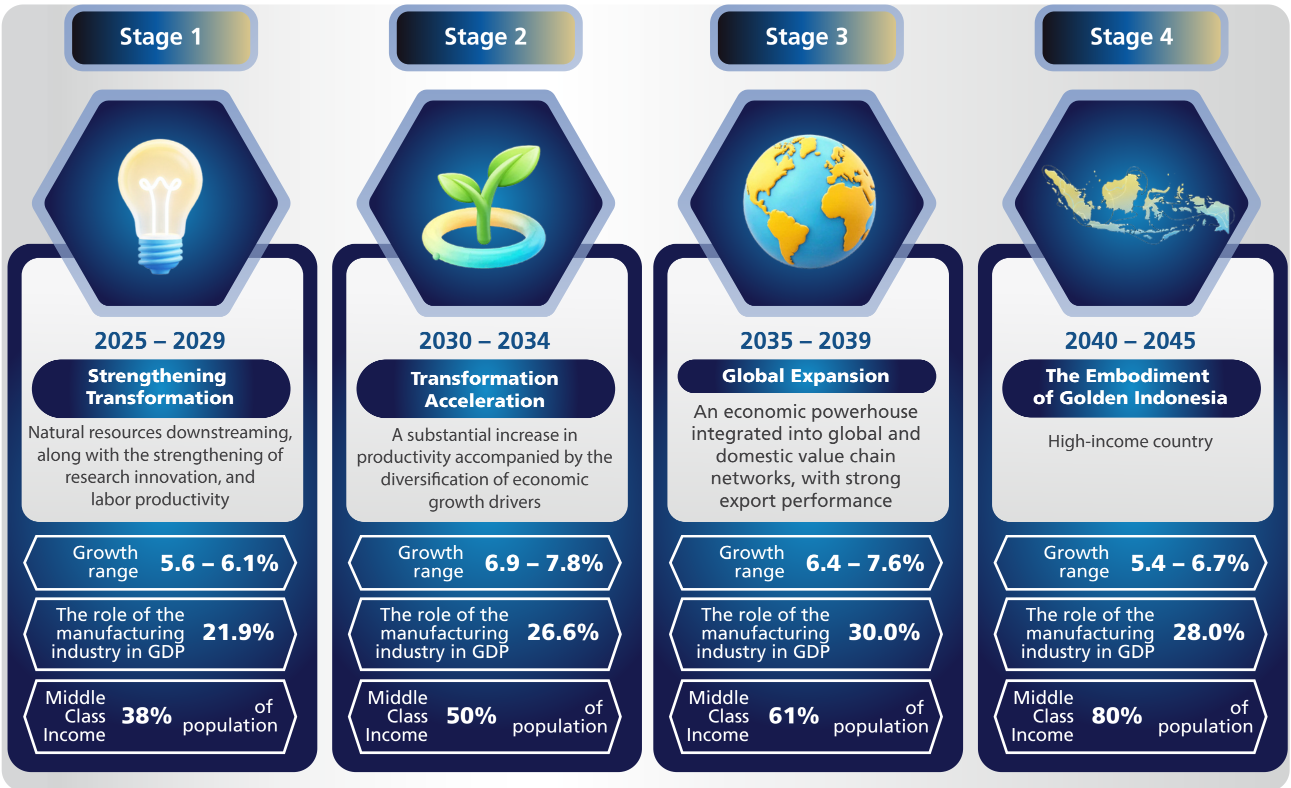
Indonesia's industrialization promotes higher value-added in export products and strengthens the investment attractiveness of the manufacturing sector

Graph 6.9. Global Innovation Index



Source: World Intellectual Property Organization, processed

Figure 6.3. Stages of Economic Transformation



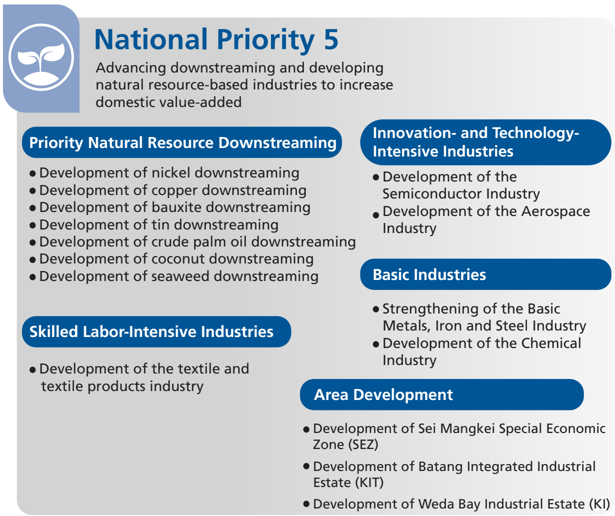
Source: National Development Planning Agency (Bappenas), 2024

strengthening of the national logistics system; (iv) the enhancement of investment to support domestic and global economic integration; (v) the expansion of domestic, interregional, and export trade, along with increased participation in global value chains; and (vi) the optimization of national strategic investment.

Industrial downstreaming policy focuses on priority natural resource commodities and strengthening priority manufacturing industries. Priority commodities selected must make a significant contribution to GDP. In addition, these commodities should generate high value-added, taking into account their potential for local employment absorption, industrial readiness, investment opportunities, availability of raw materials, and environmental impacts. Natural resource downstreaming is aimed not only at increasing value-added and enhancing export competitiveness, but also at strengthening Indonesia's position in global value chains (GVCs), reducing import dependence, and promoting more optimal utilization of natural resources. In this regard, priority commodities over the medium-term include nickel, copper, bauxite, tin, palm oil, coconut, and seaweed (Figure 6.4.), with potential inclusion of rare earth elements, given strong global demand, particularly for electric vehicles, batteries, electronic devices, and advanced defense systems. Nevertheless, the management of rare earth elements remains closed to private sector participation and is carried out entirely by the Mineral Industry Agency. Innovation- and technology-intensive industries will focus on the semiconductor and aerospace industries, while basic industries will emphasize the strengthening of basic metals, iron and steel, and the chemical industry. These policies are reinforced through industrial agglomeration in priority Industrial Estates (KI)

> The direction of industrialization policy through downstreaming focuses on priority natural resource commodities and the strengthening of priority manufacturing industries

Figure 6.4. Priority Natural Resource Downstreaming Commodities under the National Medium-Term Development Plan (RPJMN)



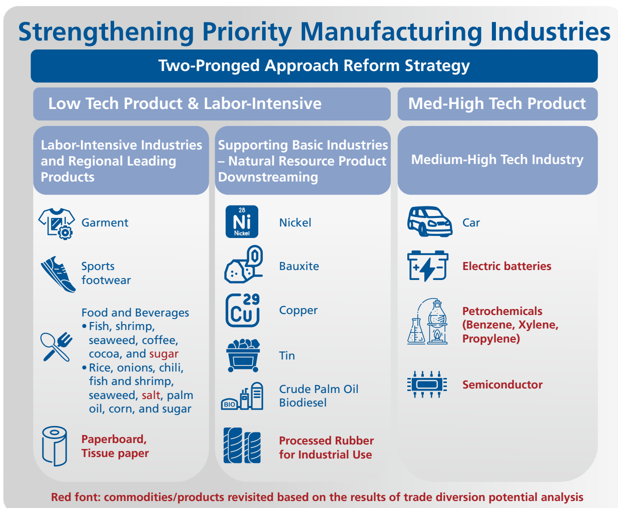
Source: National Medium-Term Development Plan (Bappenas)

and Special Economic Zones (KEK), such as Sei Mangkei SEZ, Batang Integrated Industrial Estate (KIT Batang), and Weda Bay Industrial Estate (KI Weda Bay).

Priority manufacturing development follows a two-pronged approach reform strategy, targeting medium-to-high-technology industries and labor-intensive, low-technology industries. Industrial strategies for medium- to high-technology sectors are focused on the automotive industry, electric batteries, petrochemicals (benzene, xylene, and propylene), and semiconductors (Figure 6.5.). Supporting industrial strategies for low-technology sectors are focused on natural resource-based products such as nickel, bauxite, copper, tin, crude palm oil (CPO), and processed rubber for industrial use. Labor-intensive industrial strategies and regionally leading products are focused on garments, sports footwear, as well as a range of plantation, agricultural, and fisheries products. The selection of these strategies is based on several considerations, including technological adoption capacity, the development of downstreaming and industrial value chains, and the availability of exploration potential of the relevant natural resource commodities. Overall, strengthening priority manufacturing industries through this two-pronged approach is expected to enhance national industrial productivity and competitiveness, reinforce the resilience of the economic structure, and reaffirm the manufacturing sector's role as the main engine of long-term economic growth that is inclusive and sustainable.

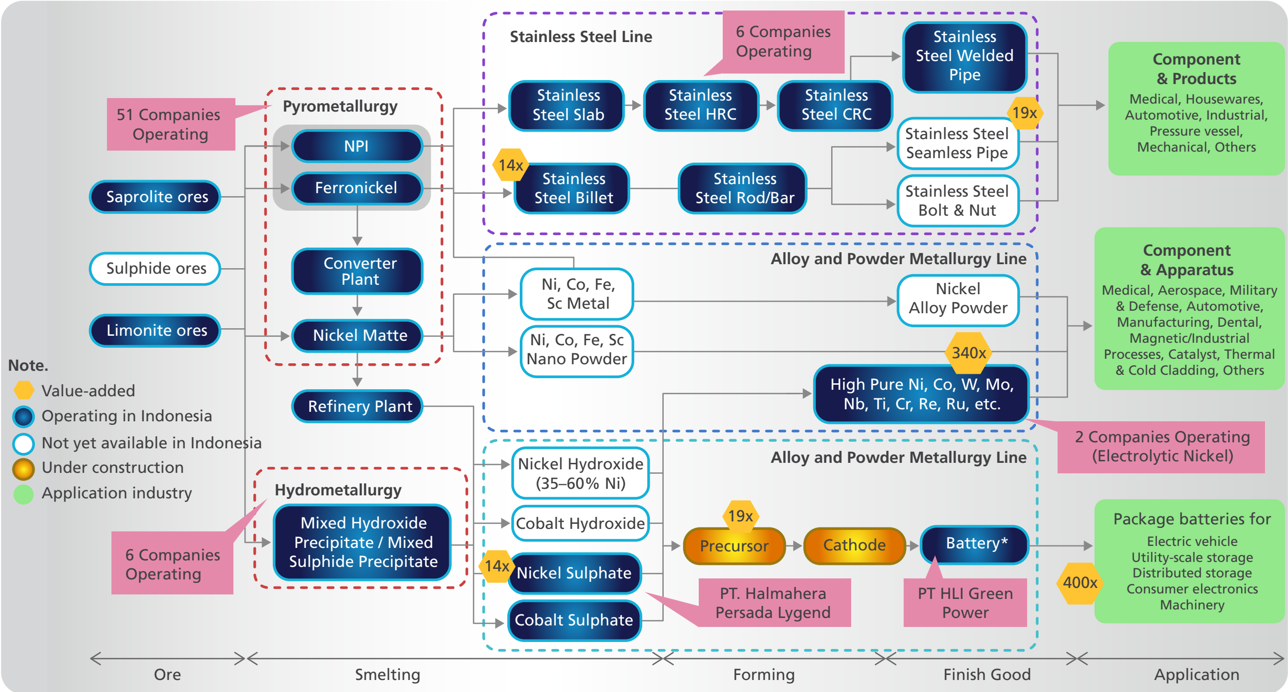
Nickel downstreaming exemplifies successful value chain development, shifting exports from raw materials to high value-added products. The policy banning nickel ore exports since January 2020, combined with the accelerated development of processing facilities, has promoted a transition in exports from raw materials to higher value-added processed products, including ferronickel, nickel pig iron (NPI), and intermediate products for the electric vehicle battery industry (Figure 6.6.). This transformation has significantly increased the export value of nickel downstreaming products and strengthened Indonesia's position within the global supply chain for the metals and clean technology industries (Graph 6.10.). In addition, foreign direct investment (FDI) inflows have also increased, particularly in the development of smelters and integrated industrial estates, bringing in capital, technology, and access to global markets. Beyond trade and investment, the impact of nickel downstreaming policies extends further by fostering the emergence of new industrial centers outside Java, such as in Morowali Regency and Central Halmahera Regency. The development of industrial hubs

Figure 6.5. Strengthening Priority Manufacturing Industries



Source: Bank Indonesia

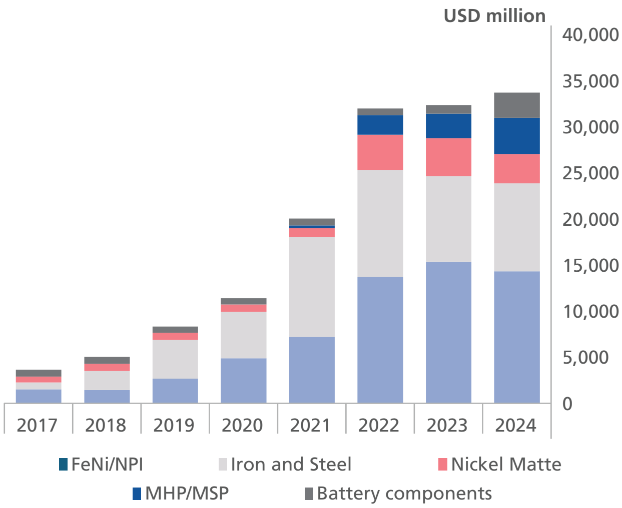
Figure 6.6. Industrial Tree of the Nickel Commodity



Source: Ministry of Industry

in these regions has accelerated local economic transformation from areas dominated by primary activities—namely agriculture and raw material mining—into centers of high value-added processing industries. Regional economic structures have also shifted, as reflected in the rising contribution of the manufacturing sector to gross regional domestic product (GRDP), the creation of non-agricultural employment, and the expansion of related economic activities, including logistics services, construction, housing, and trade (Figure 6.7.). Accordingly, nickel downstreaming not only serves as an instrument for increasing national value-added, but also acts as a catalyst for more balanced development, the strengthening of the industrial base outside Java, and the acceleration of regional economic transformation toward a more productive and competitive economic structure.

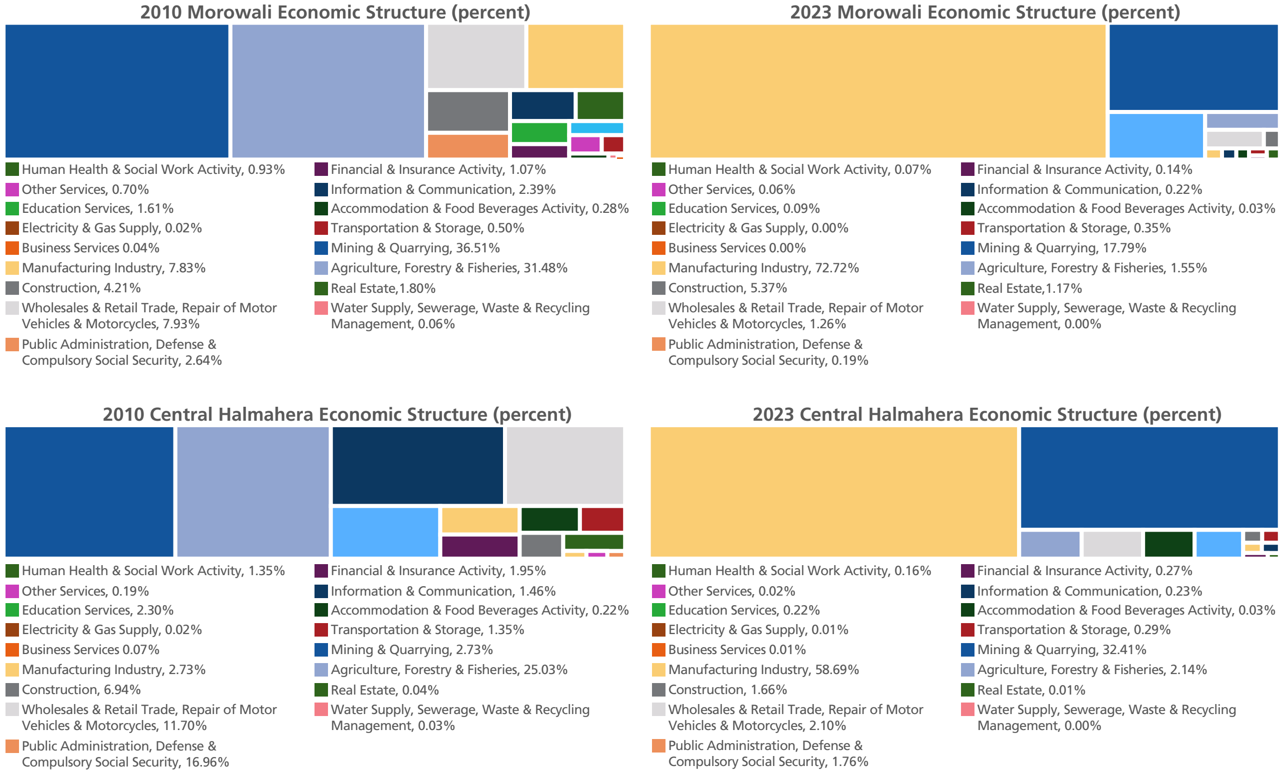
Graph 6.10. Exports of Nickel Downstreaming Products



Source: CEIC, processed

Industrialization requires a strengthened role and support from State-Owned Enterprises (SOEs) as well as private corporations, including in financing downstreaming investment. The roles of SOEs and the private sector are complementary and mutually reinforcing. SOEs serve as anchors of industrialization, particularly in strategic and capital-intensive priority sectors. In this context, SOEs play a key role in paving the way for downstreaming development. SOEs also contribute to the creation of markets and the establishment of downstreaming industrial ecosystems.

Figure 6.7. Economic Structure of Nickel Downstreaming Hub Regions



Source: CEIC, processed

Meanwhile, private corporations play a crucial role in downstreaming through investment, production, and downstream-oriented innovation. Foreign private corporations act as accelerators of industrialization and as key entry points for technology transfer and integration into global value chains. Furthermore, the role of the private sector is critically important in financing investment, given the limited fiscal financing capacity.

Industrialization through downstreaming can function as an engine of economic equity, supporting an inclusive and sustainable economic structure. Downstreaming strengthens local economies through industrial partnerships with communities and micro, small, and medium enterprises (MSMEs). MSMEs participate in downstreaming value chains through the provision of raw materials, small-scale downstream processing, and the distribution of downstreaming products in local markets. In addition, the development of downstreaming industries and Industrial Estates (KI) and Special Economic Zones (KEK) outside Java promotes more balanced economic development and creates new employment opportunities beyond Java.

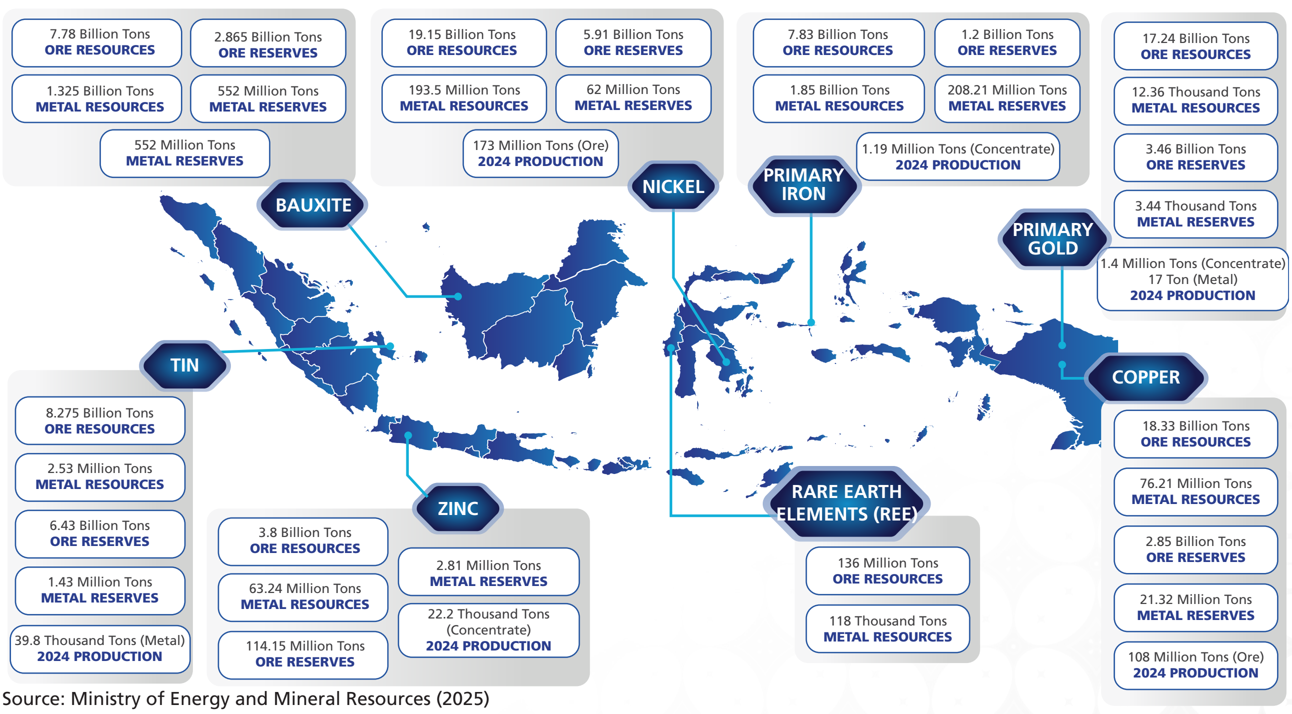
Strategic partnerships between downstreaming industries, communities, and MSMEs continue to be expanded. Synergies among downstreaming corporations, local communities, regional governments, and MSMEs are being strengthened through mutually beneficial relationships. The contribution of downstreaming companies in developing local MSME businesses can be further expanded through deeper integration into local value chains. For instance, in several regions downstreaming companies have involved local communities in workforce recruitment as well as in the provision of local goods and services. Moreover, companies have contributed to the development of surrounding MSME ecosystems, including food stalls, housing rentals, and logistics services for employees and nearby communities. This model supports long-term economic sustainability, more equitable welfare outcomes, and the strengthening of regional economic structures.

Going forward, global demand prospects for Indonesia's leading export commodities are projected to remain strong, supporting the sustainability of downstreaming policies. These favorable prospects are aligned with the development of green industries and new and renewable energy (NRE), electronics, construction activities, and rising global food demand. Demand for nickel commodities continues to increase, driven by the electric vehicle industry and other NRE-related industries. Prospects for bauxite demand remain strong, supported by green industries, such as electric vehicles, solar panels, and wind turbines. Meanwhile, demand prospects for palm oil are expected to continue rising, particularly for food and biodiesel needs, while demand for seaweed is also projected to remain strong, especially for biostimulant and food industries.

Prospects for rising global demand are supported by the availability of adequate mineral reserves and land resources. The reserves and land area of nearly all of Indonesia's leading commodities rank among the world's top ten and are geographically dispersed across regions (Figure 6.8.). Indonesia possesses the world's largest nickel reserves, primarily located in Sulawesi and North Maluku. In addition, Indonesia holds the world's second-largest tin reserves, concentrated in the Bangka Belitung Islands. Indonesia's bauxite reserves are also substantial, ranking sixth globally and distributed across Kalimantan, Sumatra, and Java. Indonesia is also the world's largest palm oil producer in terms of plantation area, mainly located in Sumatra and Kalimantan. Indonesia's seaweed production ranks second globally, with production centers spread across various regions. Rare earth mineral reserves are also abundant, particularly in Sulawesi, positioning Indonesia as one of the countries with very significant rare earth potential worldwide.

Going forward, the strengthening of downstreaming needs to be supported by the optimization of research and innovation. The success of industrialization in South Korea and China, among others, has been underpinned by strong research and development (R&D) capacity. Meanwhile, the role of R&D in Indonesia in driving industrial upgrading—including deeper downstreaming, technological mastery, and the development of high value-added products—remains suboptimal. This condition is reflected, among others, in the relatively low

Figure 6.8. Map of Natural Resource Endowments and Mineral Reserves of Key Commodities, 2024



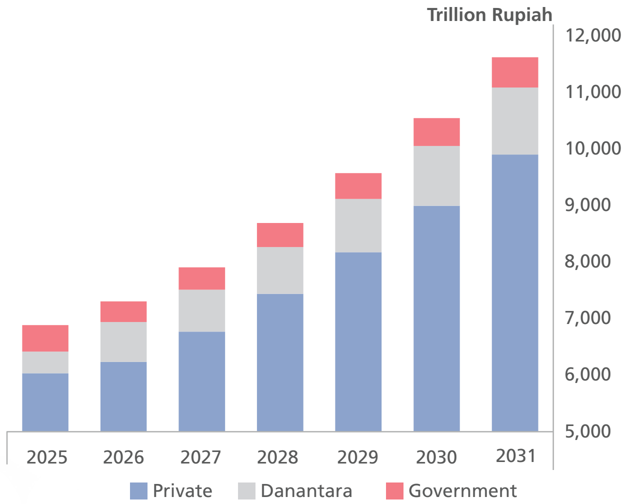
Source: Ministry of Energy and Mineral Resources (2025) level of government expenditure on science and technology (S&T) capacity building and innovation, which stands at around 0.28% of GDP. This level is lower than that of South Korea (4.81% of GDP), Thailand (1.31% of GDP), and Malaysia (1.04% of GDP) in 2020. Therefore, the Government has set a target to gradually increase spending on research and innovation to reach 0.45% of GDP by 2029. Over the medium-term, the Government is strengthening research and innovation policies directed toward increasing the contribution of science and technology and innovation to national development; enhancing vocational education, training and labor productivity; as well as developing a national talent management system. The increased contribution of science and technology and innovation to national development is pursued through the development of an integrated ecosystem extending through downstreaming and utilization, particularly within the industrial sector.

6.3.4. Investment and Financing Needs for National Industrialization

International experience shows that appropriate financing models are critical for successful industrialization. China, for example, relies on bank consortia supported by industrial policy and fiscal incentives (Geißendörfer & Haas, 2022). South Korea combines *chaebol* leadership with export credit and long-term financing (Lim, 2012). Meanwhile, mineral-producing countries such as Chile and Australia leverage synergies among national companies, sovereign wealth funds, and public-private partnerships (Mami, 2023; Britt & Czarnota, 2024). Lessons from these international practices underscore the critical role of the state in ensuring the success of industrialization, particularly in reducing early-stage investment risks and providing business certainty.

Capital and investment needs for real sector transformation, especially for natural resource downstreaming and industrialization, are substantial and cannot rely solely on the state budget (APBN). Total investment requirements for 2025–2031 are estimated at Rp62.54 thousand trillion; it increases from Rp6.88 thousand trillion in 2025 to Rp11.63 thousand trillion by 2031 (Figure 6.11.). These investment needs are expected to be financed from three main sources, namely the Government, State-Owned Enterprises including Danantara, and the private sector. Considering the limited, available fiscal space—including the prioritization of social spending and the statutory fiscal deficit ceiling of no more than 3% of GDP—investment financing from the State Budget over the period is projected at Rp3.15 thousand trillion, or around 5.0% of total investment needs. Meanwhile, investment financing from SOEs and Danantara is estimated at approximately Rp5.84 thousand trillion, or 9.3% over the same period. The largest share of investment financing is expected to be provided by the private sector, amounting to an estimated Rp53.56 thousand trillion, or around 85.6% of total investment requirements. This sizable share of private sector financing constitutes the greatest challenge to the successful implementation of real sector transformation policies. This challenge further highlights the need to establish clear and commercially viable business models, strengthen governance and institutional frameworks, and enhance technological adoption capacity within natural resource downstreaming and industrialization programs, so that they remain attractive both to domestic investors and foreign investors.

Graph 6.11. Projected Total Investment and Financing Sources for 2025–2031



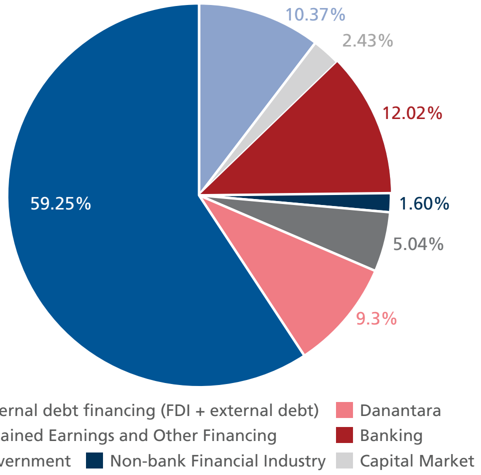
Source: Bank Indonesia, processed

Policy synergy among the Government, Danantara, Financial System Stability Committee (KSSK), and Bank Indonesia must be strengthened to mobilize private financing to meet substantial future investment needs. Based on prevailing private sector investment financing patterns, approximately 59.25% of total private investment requirements during the 2025–2031 period—equivalent to around Rp37.1 thousand trillion—is projected to be sourced from internal corporate funds, comprising retained earnings and other internal financing sources (Figure 6.12.). In addition, private sector financing sourced from external funding, in the form of foreign direct investment (FDI) or external borrowing, is estimated to account for around 10.37% of total private sector requirements, or approximately Rp6.5 thousand trillion. Further private sector financing is expected to come from bank credit and financing, amounting to around 12.02% of private investment needs, or approximately Rp7.52 thousand trillion over the same period. The remainder of private sector financing is projected to be sourced from the capital market and non-bank financial institutions. For new projects with limited internal funding availability, a larger share of investment requirements is expected to be fulfilled through bank credit/financing and external financing.

Policy synergy to mobilize financing from four main sources—namely internal funds, banking, foreign direct investment, and the Government budget—needs to be optimized in order to achieve high economic growth over the next five years. In this regard, policy synergy is focused on four key aspects: optimal project financing structures; appropriate financing sources;

Policy synergy between the Government, Danantara, the Financial System Stability Committee (KSSK), and Bank Indonesia needs to be further strengthened to support industrialization financing

Graph 6.12. Investment Financing Sources Composition Projection 2025–2031



Source: Bank Indonesia, processed

liquidity and hedging; and financial education and literacy. Project financing structures may be sourced from the private sector, including bank credit/financing, issuance of bonds or other securities in the domestic capital market, as well as borrowing from foreign investors. In addition, some projects generate commercial returns, allowing a significant portion of their investment needs to be met by the private sector through equity, bank credit, foreign loans, and foreign direct investment. However, other projects continue to require partial financing support and fiscal incentives from the Government to enhance their commercial viability. Such fiscal incentives and/or other government policies include tax arrangements, interest subsidies, and policy certainty, particularly during the grace period from the construction phase to the initial stage of operations.

Danantara plays a significant role both in business model implementation and in investment financing for natural resource downstreaming and industrialization projects. In this context, Danantara serves as a long-term financing lever (anchor investor) to accelerate downstreaming by reducing early-stage project risks, ensuring the formation of integrated upstream–downstream ecosystems, and attracting private sector investment. In determining its investment priorities, Danantara considers at least three key factors, namely:

(i) the impact on the national economy; (ii) sustainable returns; and (iii) the feasibility of realizable investment opportunities. Based on these considerations, Danantara focuses its investment portfolio on eight priority sectors, namely: (i) the mineral sector, particularly nickel and bauxite commodities; (ii) renewable energy, including downstream oil and gas products; (iii) digital infrastructure, particularly data centers; (iv) healthcare, including the development of plasma fractionation facilities and hospital value chains; (v) financial services, including asset and credit securitization; (vi) infrastructure and facilities for waste processing and mining infrastructure; (vii) industrial estate development; and (viii) food and agriculture. The development of commercially viable business models for downstreaming and industrialization in these priority sectors is essential to attract investment from both the Government—through Danantara—and private investors, domestically and internationally. In implementation, Danantara can strengthen the bankability of downstreaming projects through a combination of equity instruments, project financing, and co-investment with strategic partners, including by facilitating access to external financing.

6.4. Synergy between Structural Policies and Industrialization

Economic transformation toward sustainable industrialization requires strong and consistent policy coordination across authorities, as well as close synergy between structural and industrial policies. The success of industrialization in other countries has been supported by strong synergy among the Government, the private sector, and other authorities, complemented by structural policies as a foundational element. In South Korea, successful industrialization has been underpinned by integrated policies among the Government, the central bank, the banking sector, and industry, with chaebol serving as the main growth engines. By comparison, in China, downstreaming policies have been implemented in an integrated manner across authorities and the private sector, with a dominant role played by the Government, thereby supporting successful industrialization. Industrialization policies in both countries have been reinforced by structural policies, including well-governed institutional frameworks and strong research and development (R&D) activities.

A policy mix combining structural reform and industrialization policies serves as an alternative approach for the development of priority sectors. Structural reforms are generally more challenging to implement due to their reliance on government bureaucracy at both central and regional levels. Accordingly, a combination of structural reform policies and industrial policies may represent a pragmatic option. This approach can be pursued by implementing industrial policies to enhance productivity, value-added, and competitiveness of leading sectors within Special Economic Zones (KEK) as growth centers, while simultaneously advancing reform policies to improve the investment climate, infrastructure connectivity, governance and institutional efficiency, as well as innovation and research to accelerate technology adoption. In this regard, the development of several Industrial Estates (KI) and Special Economic Zones (KEK)—including Batang, Sei Mangkei, and Weda Bay—as growth centers for natural resource downstreaming and industrialization, as well as other priority sectors, represents an appropriate policy step within the combined implementation of industrial and structural policies.

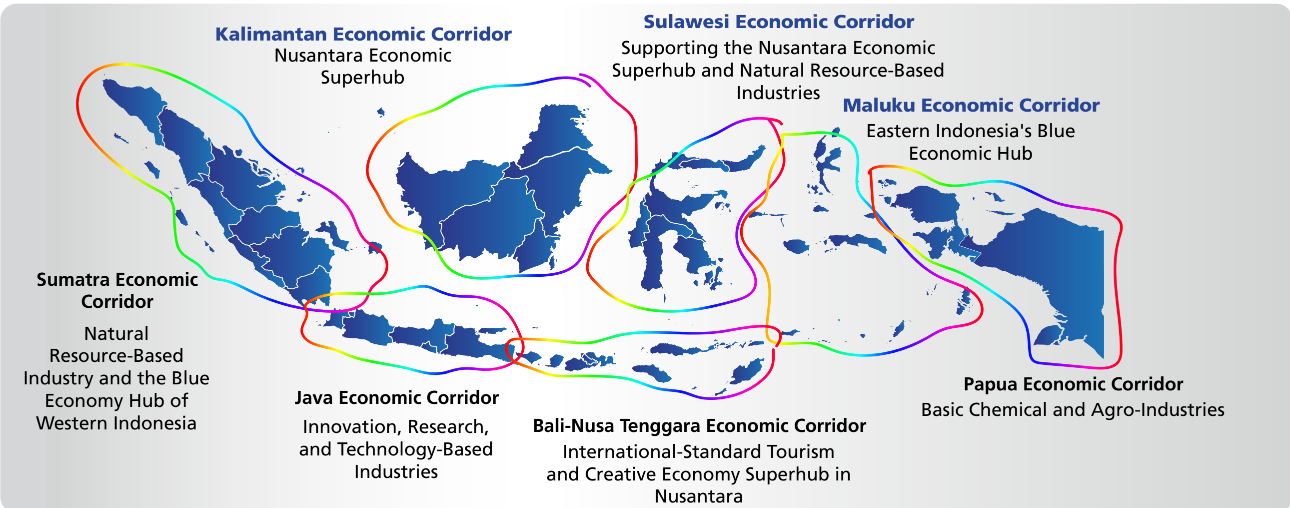
Policy reforms in Industrial Estates (KI) and Special Economic Zones (KEK) need to be accelerated to transform these areas into competitive engines of downstreaming and industrialization. Lessons from international experience indicate that the key success factors for KI/KEK development include the availability of reliable infrastructure and utilities, encompassing logistics connectivity, energy access, and essential area services. In addition, the availability of skilled labor is required through strengthened link and match programs and training. Equally important are deregulation or integrated licensing simplification and land certainty, supported by easier access to financing and funding schemes aligned with the characteristics of industrial projects. These policy

The Governor of Bank Indonesia attended the inauguration of the Batang Industropolis Special Economic Zone (SEZ), together with the President and the Red and White Cabinet, Batang Regency, Central Java, 20 March 2025

reforms need to be implemented on a tailor-made basis, reflecting the specific characteristics and challenges faced by each area. Under the 2025–2045 National Long-Term Development Plan (RPJPN), the Government has mapped thematic economic transformation by region, with natural resource-based industries to be concentrated in Sumatra and Sulawesi (Figure 6.9.). From the financing perspective, access to long-term funding needs to be expanded through strengthening of the banking sector and financing institutions, project financing and blended finance schemes, as well as selective and performance-based incentives to accelerate investment inflows and enable the development of integrated value chains from upstream to downstream.

The development of selected Special Economic Zones (KEK) and Industrial Estates (KI) has the potential to serve as downstreaming business models going forward, supported by adequate incentives, strategic locations, and reliable area infrastructure and utilities. Lessons drawn from three illustrative zones indicate that Batang Industrial Estate demonstrates how a combination of proximity to major markets and logistics hubs, comprehensive investment incentive packages, and strengthened connectivity—including port support and transport access—can accelerate tenant entry and promote manufacturing-based export growth. Weda Bay Industrial Estate underscores the importance of sufficient and sustainable

Figure 6.9. Regional Thematic Economic Transformation



Source: National Long-Term Development Plan (RPJPN) 2025-2045 energy availability, as well as licensing certainty, as prerequisites for the expansion of mineral downstreaming areas to ensure that subsequent investment can proceed without disruption. Meanwhile, Sei Mangkei Special Economic Zone highlights the need for more targeted reforms, particularly energy pricing incentives and expedited development of supporting infrastructure. Logistics connectivity to ports, provision of worker housing, strengthened waste management, and accelerated completion of environmental documentation constitute critical supporting infrastructure to enhance the competitiveness of the zones and attract downstream industrial investment on a sustainable basis.

Synergy between structural and industrial policies ensures that long-term foundational economic reforms are aligned with the direction of industrial development. Such synergy does not occur automatically, but rather requires a systematic and well-coordinated approach. At least five key approaches reflect the synergy between structural and industrial policies.

***First*, maintaining macroeconomic and financial system stability as a prerequisite for successful industrialization.** Fiscal policy is directed toward supporting economic growth through productive expenditure, while continuing to safeguard macroeconomic stability. Fiscal incentives and stimulus measures to support industrialization are implemented in a calibrated manner, taking fiscal sustainability into account. Bank Indonesia's monetary policy is oriented toward supporting economic growth while consistently achieving the inflation target and maintaining Rupiah exchange rate stability. Coordination between the Government's fiscal policy and Bank Indonesia's monetary and macroprudential policies is continuously strengthened to strike a balance between safeguarding macroeconomic stability and promoting economic growth. Furthermore, policy synergy within the Financial System Stability Committee (KSSK) is directed toward reinforcing financial system stability.

***Second*, structural and industrial policies share a common objective of transforming the real sector to foster higher and more resilient economic growth.** Synergy between structural and industrial policies is essential to enhance productivity, capital accumulation, and labor capacity. Structural policies focus on strengthening economic fundamentals through improvements in the investment climate, healthy business competition, infrastructure connectivity, and trade and investment policies. Industrial policies, meanwhile, are directed toward increasing value-added in selected economic sectors designated as national priorities. Synergy between the two policies can be achieved when structural policies are also designed to prioritize sectors aligned with industrial policy objectives. Industrial Estates (KI) and Special Economic Zones (KEK) represent one model of such structural–industrial policy synergy. Industrial policies in KI/KEK are generally implemented to enhance productivity in specific priority sectors as growth centers, supported by structural reforms aimed at improving the investment climate, connectivity infrastructure, governance and institutional bureaucracy, human capital quality, and the development of research and development (R&D) to accelerate technology adoption. Over the long-term, the Government has mapped regional thematic economic transformation, with natural resource-based industries to be concentrated in Sumatra and Sulawesi. Accordingly, future synergy between structural and industrial policies will be more region-specific and better aligned with local characteristics. Structural policies also support the development of micro, small, and medium enterprises (MSMEs) as strategic partners in downstreaming industries. In this context, MSMEs participate in providing raw materials, undertaking initial processing, delivering logistics and supporting services, conducting small-scale processing, and carrying out local distribution and marketing. The role of MSMEs in industrialization supports a more inclusive and sustainable economy.

***Third*, industrialization requires substantial investment financing, thereby necessitating structural policies to facilitate access to financing.** The Government plays a strategic role through industrial policies by providing incentives and strengthening downstreaming regulations. In addition, the Government's role in structural policies is critical in improving the investment climate, including through licensing simplification, enhanced legal certainty, and ease of doing business to attract long-term industrial investment. Bank Indonesia supports Government policies by continuously assessing room for further BI-Rate reductions in line with prevailing economic conditions. Monetary policy is complemented by liquidity expansion to strengthen the effectiveness of interest rate transmission from BI-Rate adjustments to banking sector interest rates, including lending rates for priority sectors. Macroprudential policy remains accommodative to encourage bank credit and financing, particularly to priority sectors that support economic growth and job creation in line with the Government's *Asta Cita*. Bank Indonesia also supports industrial financing through financial market deepening, including the development of the money market and foreign exchange market (PUVA). Synergy between Bank Indonesia and the Financial Services Authority (OJK) is pursued to optimize credit distribution while safeguarding banking system risks. Financial market development synergy within KSSK, as well as with ministries, agencies, authorities, and market participants, continues to be strengthened to foster innovation in financing and hedging instruments. In addition, Bank Indonesia, in coordination with fiscal policy and KSSK, continues to encourage banks to lower lending rates and expand credit and financing to priority sectors. Enhanced synergy among the Government, Danantara, KSSK, and Bank Indonesia is also pursued to explore private sector financing sources.

***Fourth*, structural reform through the development of physical and digital infrastructure connectivity serves as the foundation of industrialization policy.** Infrastructure development needs to be aligned with the industrialization roadmap. The availability of physical infrastructure connecting regions across Indonesia, including the provision of basic infrastructure within KI and KEK, is essential for effective industrialization. Furthermore, integrated multimodal logistics infrastructure supports downstreaming value chains. Digital infrastructure development supports downstreaming by enhancing efficiency, strengthening integrated value chains, reducing transaction and logistics costs, and expanding market access and global integration. In this regard, Bank Indonesia contributes through the acceleration of payment system digitalization.

***Fifth*, export-oriented industrialization policies are supported by international trade and investment cooperation.** Indonesia has pursued bilateral, regional, and multilateral economic cooperation to enhance trade, investment, and economic growth. For example, Indonesia has signed strategic memorandum of understanding (MoU) with China to promote investment in manufacturing, renewable energy, and logistics sectors. This cooperation aims to attract investment, create jobs, and increase MSMEs participation in global supply chains. In the realm of international cooperation, Bank Indonesia continues to strengthen the management of positive perceptions among investors and rating agencies to support the investment climate, while promoting trade and investment through Bank Indonesia's Investor Relations Unit (IRU).

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