Chapter 21

Conclusion: Policy Recommendations for Achieving High-Income Status by 2045

Keita Oikawa

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1. Challenges in the Vietnamese Economy: Transitioning from an Input-Driven to an Innovation-Driven Economy

The Vietnamese economy has achieved relatively high economic growth rates since the early 1990s. This development followed a few years after the adoption of the 'Doi Moi' policy, which encompassed comprehensive economic reforms and external openness, initiated during the 6th National Congress of the Communist Party of Viet Nam in 1986. The annual per capita real gross national income growth rate consistently hovered around 5.0% from 1995, when Viet Nam became a Member State of the Association of Southeast Asian Nations (ASEAN), to the eve of the coronavirus disease (COVID-19) pandemic in 2019. This growth trajectory significantly outpaces the average growth rate witnessed in advanced economies, which stood at a more modest 2%. Notably, Viet Nam has consistently worked towards diminishing the income disparity with advanced economies since it transitioned from low middle-income status in 2008.

In this context, the objective of achieving high-income status by 2045, marking the centennial of independence, was established during the 13th National Congress of the Communist Party of Viet Nam in January–February 2021. To attain this objective, given Viet Nam's per capita gross national income of $4,010 in 2022 as a baseline, it is imperative to achieve an average annual growth rate of 5.4%, slightly surpassing the average rate observed over the past 25 years. This growth trajectory is essential to reach the minimum income threshold for advanced nations, as defined by the World Bank, amounting to $13,206, by 2045.

Considering the demographic trends in Viet Nam, the ratio of working-age population to the total population is expected to continue to rise until the late 2020s, a phase referred to as the 'population bonus' period. Subsequently, a transition is projected into the 'population onus' phase, characterised by a declining ratio. This transition holds implications for macroeconomic growth, signifying that the demographic factor – previously a catalyst for growth – is undergoing a transformation into a limiting factor. Consequently, Viet Nam needs to markedly enhance the output per working-age population, which translates to productivity.

To expedite the increase in macroeconomic productivity, industrial upgrading is imperative. Viet Nam has attained economic growth, fuelled by input factors, through strategic utilisation of foreign direct investment (FDI) and engagement in global value chains (GVCs). In the initial phases of economic development, capitalising on the comparative advantage of labour-intensive industries, supported by a plentiful domestic labour force, achieving industrialisation aligns with economic principles and is devoid of issues. Nonetheless, as depicted in Chapter 6, Viet Nam's participation in GVCs has not notably augmented domestic

value added. If the present trajectory of input-driven economic growth persists, the productivity growth rate could gradually decelerate, potentially leading to stagnation of income levels at the middle-income threshold, thus succumbing to the so-called middle-income trap. To evade this trap, Viet Nam's economy needs to transition from being input-driven to being innovation-driven, harnessing industrial enhancement that elevates the contribution of domestic value added to GVCs.

To achieve the transition towards an innovation-driven economy, several measures are imperative. First, the enhancement of human capital takes precedence. Viet Nam is currently grappling with a shortage of skilled labourers, necessitating the empowerment of individuals capable of driving advanced industrial structural transformations. This can be accomplished by attracting skilled workers from abroad, including Japan, while simultaneously expanding engineering, economics, and business administration departments within universities to bolster the supply of engineers and management-level professionals. Additionally, establishing mechanisms for reskilling and upskilling the existing workforce will be effective. Although time-intensive, fortifying fundamental workforce development through school education improvements – including robust science, technology, engineering, and mathematics (STEM) education – remains imperative.

Second, enhancing labour market efficiency is pivotal. In Viet Nam, an oversupply of labourers in rural areas contrasts with labour shortages in urban centres, indicating an inadequately functioning labour market. Rooted in challenges such as constrained access to education and healthcare services for rural-origin individuals due to household registration systems, as well as subpar living conditions, addressing these issues and creating a labour market that facilitates the seamless movement of labour resources to growth industries is essential.

Third, improving capital market efficiency is fundamental. Financial institutions like banks face limitations in accessing information that influences the performance of borrowing enterprises and in monitoring their activities (information asymmetry), resulting in market inefficiencies such as demanding high interest rates from borrowing enterprises. Small and medium-sized enterprises (SMEs) in Viet Nam experience particularly elevated interest rates and stringent collateral requirements, impeding the growth of vital SMEs that contribute to domestic employment. It is advisable to establish specialised financial institutions for SMEs, staffed with experts to evaluate investment projects, and to adopt systems like the Japanese Certified Management Consultant system, which assists in SME management improvements, investment project planning, and loan application preparations. Encouraging the formalisation of the informal sector, such as self-employed workers, to foster transparent accounting practices is also recommended.

Fourth, ensuring a conducive environment for inter-firm competition is paramount. Elevating turnover within and between industries is pivotal for achieving advanced industrial structural transformations while adapting adeptly to domestic and international business landscapes. In the pursuit of elevating Viet Nam's industrial structure, the government may implement industry promotion policies. Although such policies can be misconstrued as safeguarding existing firms within specific industries, successful industrial policies, akin to those observed in Asia's success stories, concentrate on fostering competition and encouraging the entry of new and young businesses rather than protecting specific entities. Ensuring a competitive environment remains vital, even in the context of industry promotion.

Last, promoting technology adoption that contributes to industrial progress is imperative. As technology is essentially universally accessible knowledge, the implementation of globally beneficial technologies domestically assumes paramount importance. While promoting FDI effectively introduces advanced overseas technologies, it is equally vital to integrate an FDI perspective that aligns with the vision of achieving advanced industrial structural transformation. Simultaneously enhancing the capabilities of domestic SMEs and fostering vertical collaboration between foreign-owned companies and SMEs are desirable to expedite technology dissemination.

In summary, this section delineates the indispensable measures through a backward-looking approach from the 2045 goal of advanced country status, recognising the urgency of transitioning from the prevailing input-driven economy to an innovation-driven paradigm. It addresses policies for augmenting human capital, enhancing labour and capital market functionality, ensuring a competitive environment, and facilitating technology adoption from a macroeconomic perspective. The rest of this chapter will elucidate the tangible manifestation of an innovation-driven economy, spotlighting changes in the industrial structure up to 2045, challenges specific to pivotal sectors, and the trajectory of policy strategies.

2. Concrete Form of an Innovation-Driven Economy: Digital Nation Viet Nam

To achieve the transition towards an innovation-driven economy, attention should be directed towards pivotal technologies within the contemporary technological landscape, including artificial intelligence (AI), the Internet of Things (IoT), robotics, blockchain, and other advanced information and communication technologies collectively referred to as digital technologies. Since digital technologies are versatile tools that wield influence across not only specific industries but also the entirety of industries and economic activities, the extent of integrating digital technologies decisively shapes the productivity and competitiveness of all sectors. Consequently, in its pursuit of an innovation-driven economy, Viet Nam should embrace the concept of becoming a digital nation, given its significance as a foundational principle.

In the pursuit of a digital nation, the key is to smoothly implement digital technologies into the economy and society. For this purpose, institutional arrangements to overcome the social concerns brought about by digital technologies are necessary. For instance, rapidly evolving AI has the

potential to dramatically improve the productivity of fundamental processes such as prediction, automation, quality control, and environmental impact measurement in production and business activities. However, computer-based thinking and inference are unprecedented phenomena, and the development and use of AI involve ethical standards, integrity, and the validity of content provided by chatbots, raising many concerns. Overcoming such concerns while promoting the rapid implementation of digital technologies is essential to realise Digital Nation Viet Nam. The measures to be taken are discussed in the section dedicated to digital transformation (DX) industries.

3. Projected Changes in the Industrial Structure

As the industrial structure advances and income levels rise, it is anticipated that the composition of key industries within the economy will undergo transformation. By pursuing greater sophistication and incorporating policy recommendations from each chapter, it is envisioned that industries such as electronics, advanced agriculture, and textiles and garments, which contribute significantly to the economy's fundamental productivity and are poised for export expansion, will emerge as driving forces. Additionally, DX-related industries are expected to undergo substantial growth, further enhancing overall productivity. Furthermore, tapping into the potential of the automobile and parts industry will strengthen the foundation of economic growth. Moreover, industries contributing to the enhancement of quality of life in alignment with income level improvement, especially the medical and caregiving sectors, are predicted to experience significant expansion.

4. Challenges and Strategic Orientations for Key Industries

4.1. Automobile Industry

In the context of the ASEAN automotive and parts industry, Viet Nam's position is approaching that of the Philippines in the automobile market, and its manufacturing capacity is rivalling that of Malaysia. Notably, Viet Nam outperformed other countries in terms of automobile parts exports in 2020, particularly excelling in wire harness production.

There are two approaches to developing the automobile industry. The first aims to increase complete vehicle production by attracting investments from complete vehicle manufacturers, with a focus on catching up with leading countries in the Southeast Asian automobile industry like Thailand and Indonesia. The second approach focuses on promoting the export of automotive parts and strengthening the industrial clustering and international competitiveness of automotive parts manufacturers. This second approach is expected to enhance the international competitiveness of domestic complete vehicle manufacturers, as the strengthened automotive parts industry is likely to boost the competitive positioning of vehicle assembly manufacturers within Viet Nam.

Given the current situation, with a small domestic market for complete vehicles and the inability to fully realise economies of scale in complete vehicle production, it is appropriate to prioritise the development of the automotive parts industry, which has better access to foreign markets. Policy

formulation should consider international political and economic factors, along with the current market situation and future prospects.

Viet Nam's automobile parts industry could be developed via the following strategies. First, to enhance technological capabilities, the Vietnamese government should promote measures such as tax incentives for equipment investments, improvements in labour conditions, comprehensive skills education for skilled labourers, and bolstering advanced technology education through industry–academia collaboration to enhance the capabilities of parts companies. Second, market expansion is equally pivotal. Vietnamese automobile parts companies, leveraging global supply chains, export to Japanese and Western markets, making it crucial to secure market share. Third, the potential of the two-wheeler parts industry deserves attention. The government should provide suitable technical guidance, financial support, tax incentives, and market access to encourage the transition of two-wheeler parts companies to four-wheeler parts production. Fourth, in establishing the supply system for electric vehicle parts, the development of composite industries such as motors, inverters, e-Axles, and batteries, in conjunction with expanding charging facilities, necessitates the integration of information and software technologies, along with strengthening industry–academia collaboration.

Furthermore, based on these strategies, it is advisable to formulate specific policies for promoting the automobile industry. This includes promoting the electrification and digitisation of automobiles through motorisation advancement, fostering open trade and investment, creating new opportunities through digital technologies, and enhancing the capabilities of local suppliers. In the context of Japan–Viet Nam cooperation, it is recommended to prioritise the development of industrial talent, facilitate collaboration between Japanese and Vietnamese companies, establish digital infrastructure to enhance supply chain coordination and resilience, remain adaptable to the evolution of electric vehicles, foster the creation of sustainable mobility systems, craft a comprehensive mobility vision, and create organisations dedicated to facilitating dialogue and cooperation between the Japanese and Vietnamese governments and private sectors.

4.2. Electronics Industry

Viet Nam's electronics industry has undergone rapid growth, making it the largest export industry in the country in less than 30 years. This sector has witnessed significant evolution and gained global attention. Through the Fourth Industrial Revolution, technologies like IoT, big data, AI, and automation have converged, propelling the electronics industry into rapid transformation. Viet Nam's electronics sector has seen a surge in the number of companies and workers, contributing to gross domestic product (GDP) growth and establishing its position as a global exporter of electronic products. However, high dependence on foreign companies and challenges related to growth persist.

The challenges faced by Viet Nam's electronics industry encompass various aspects. These include excessive reliance on FDI and imported components due to rapid expansion, intensified competition, and a decline in domestic value addition. Additionally, environmental impact and labour (human rights) risks are pressing concerns, necessitating appropriate measures. Furthermore, Viet Nam's electronics industry exhibits lower competitiveness compared with other nations. Given the predominance of FDI, it is imperative to enhance domestic skills, capabilities, and collaboration.

The electronics industry's growth could be sustained through the following strategies. First, establishing a domestic supply chain and reinforcing collaboration between domestic and foreign enterprises are crucial. This not only advances domestic technology and skills, fostering enhanced competitiveness, but also reduces undue reliance on imported components. Second, addressing environmental and labour risks involves implementing sustainable manufacturing practices and labour conditions, in compliance with regulations and guidelines. Establishing a legal framework aligned with international standards is pivotal to strengthening the position of domestic companies and fostering sustainable growth. Third, amid geopolitical tensions, the advantageous patterns for locating high-tech industries are also experiencing significant changes. It is imperative to create and maintain international relationships that contribute to competitive positioning and the attraction of advanced technologies from overseas.

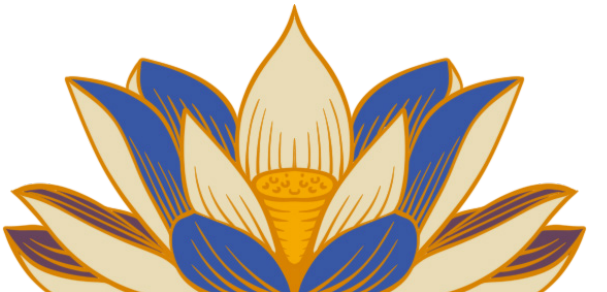
4.3. DX Industries

Viet Nam aims for high-income status, with a focus on the digital economy as a new growth driver. Digital technology is reducing the distances required for communication, enabling novel forms of the international division of labour, and giving rise to new business models. The government is establishing a digital governance structure and advancing an environment conducive to DX in emerging sectors like the sharing economy, e-commerce, and online tourism. Despite the challenges posed by the COVID-19 pandemic, the acceleration of this trend remains evident.

Progress in digital utilisation faces challenges such as aligning legal frameworks with innovation, addressing policy gaps, overcoming delayed technological development in educational institutions, securing sufficient financial resources, addressing the lack of specific tools, and ensuring consumer protection. Furthermore, as the sharing economy expands, the need for appropriate policies and regulations becomes pronounced. The following outlines measures for promoting DX industries.

First, enhancing the alignment of legal frameworks with innovation is pivotal. To address rapid changes in the digital economy, an environment facilitating swift and flexible adaptation of legal regulations is necessary. Balancing the promotion of innovation with legal constraints mandates a review and revision of legal frameworks.

Second, concrete implementation of policies to support DX industries and the provision of adequate financial resources are essential. Formulating specific policies to bolster digital technology companies and fostering their growth and competitiveness is imperative. Additionally, securing ample financial resources for investment and research and development, integral for digital economic progress, is pivotal.



Third, bolstering DX-related educational institutions is vital. To nurture talent capable of adapting to the rapid evolution of digital technologies, universities and educational establishments should introduce curricula and training programmes focused on innovative start-up ventures, strengthening skills in technology development, and entrepreneurial models.

Fourth, evaluating data localisation and cybersecurity is paramount. Safeguarding data security and privacy necessitates a thorough assessment of the implications of cybersecurity laws and provisions related to data localisation across trade, investment, and exports, ensuring harmonisation.
Last, implementing competition policies and tax reforms targeting digital technology companies is essential. To promote healthy competition amongst these companies and enhance the competitiveness of individual firms, it is crucial to simplify regulations that foster a fair competitive environment that encourages new entrants, improve consumer protection, and strengthen the provision of statistical data related to the digital economy for assessing market competition conditions. In addition to implementing competition policies, establishing a tax system that supports the growth of highly competitive digital technology companies is crucial.

4.4. Textile and Garment Industry

The textile and garment industry in Viet Nam encompasses a wide economic sector with various subsectors. In the 1990s, Viet Nam's garment industry began substantial development with the involvement of Japanese companies, and access to the United States (US) market increased through agreements like the 2001 US–Viet Nam trade agreement. The number of companies and workers in both the textile and garment sectors has risen since then, with garment products constituting a significant portion of exports, following electronics and machinery. Nonetheless, textile exports remain relatively small, underscoring Viet Nam's limited presence in the global textile and garment value chain.

One key challenge for Viet Nam's textile and garment industry is the lack of competitiveness in textile products. Viet Nam's textiles lag in both quality and price competitiveness, inducing dependence on imports. Enhancements in technological capabilities and production capacity within the textile sector are imperative. Additionally, reliance on low-wage labour poses a concern. Although Viet Nam's textile and garment industry has long relied on low-wage labour, this approach is reaching its limits. Sustaining competitiveness requires augmenting labour skills and productivity. Moreover, addressing environmental and social impacts presents a challenge. Similar to other industries, indiscriminate environmental and labour risks could result in exclusion from the textile and garment value chain.

To tackle these challenges, the following strategies are proposed. First, fostering industries through FDI is critical. Drawing FDI from economies like China, Taiwan, and the Republic of Korea to bolster the textile sector and strengthen ties with the garment industry is pivotal. This would strengthen the supply of textile materials and introduce technology, fostering sophistication in the overall industrial structure. Second, adherence to international standards and the introduction of guidelines are recommended. Globally, norms for business models that minimise social and environmental burdens, such as the Due Diligence Guidance of the Organisation for Economic Co-operation and Development (OECD) and the European Union's European Supply Chain Act directive, are being

established. Utilising these international standards and guidelines as references to promote sustainability and socially responsible corporate actions will contribute to sustained international competitiveness.

4.5. Advanced Agriculture

Since the inception of the Doi Moi policy, Viet Nam's agricultural sector has expanded, transitioning from self-sufficiency to becoming one of Southeast Asia's major agricultural exporters. Policies that liberalise agricultural production and sales, coupled with technological advancements, have notably increased rice production, establishing Viet Nam as a prominent player in the global agricultural market. Furthermore, government policies have led to significant expansion in the production of non-rice crops, contributing to the increased output of high-value export commodities.

Challenges for the future include enhancing safety and quality. With free trade agreements, overseas market requirements are escalating, requiring producers to meet these benchmarks. Moreover, the development of modern and efficient agricultural techniques capable of providing year-round supply irrespective of seasons is imperative. Additionally, concerns arise from the ageing rural population, potentially resulting in labour shortages. Environmental conservation is also a pivotal challenge, as responding to consumers' increasing environmental consciousness will influence long-term growth prospects.

To address the future of Viet Nam's agricultural sector, several strategies are necessary. First, enhancing readiness for overseas markets' safety and quality requirements warrants considering standards higher than the prevailing domestic Vietnamese Good Agricultural Practices (VietGAP). Second, promoting the adoption of digital and advanced technologies to ensure year-round supply of agricultural products and supporting efficient agricultural production and value chain development is essential. Third, addressing labour shortages necessitates devising agricultural development models that consider the implications of an ageing rural population. In this context, Japan's experience in agricultural mechanisation serves as a valuable resource. Lastly, intensifying efforts in environmental conservation and encouraging the adoption of resource-efficient and low-chemical-dependent production techniques should be encouraged.

4.6. Medical and Caregiving Industry

Viet Nam's population, which was around 27.4 million at the time of independence from France in 1954, rapidly increased to about 97.3 million in 2020 due to a high birth rate. However, government policies aimed at controlling birth rates led to a significant decrease in the total fertility rate, approaching replacement levels by the 2000s. As a result, birth rates are declining while the population is ageing. Consequently, the age composition of the population is changing, with a decrease in the young and working-age population and an increase in the population of older persons. The leading causes of death have shifted from infectious diseases to non-communicable diseases – stroke, ischaemic heart diseases, and chronic obstructive pulmonary disease.

Challenges for Viet Nam's healthcare industry include the close relationship between mental disorders and poverty, making mental health a pressing public health issue. There is a shortage

of professionals in mental healthcare. Moreover, given the rapid ageing of the population, demand will increase for specialised medical services for older persons. Furthermore, in the care industry, challenges include the possibility that family care alone may not be sufficient to meet the increasing caregiving needs of the ageing population, due to factors such as declining birth rates and rural-to-urban migration.
Proposed measures for Viet Nam include, first, improving the healthcare and care delivery system. Addressing the shortage of professionals in the mental health care sector, enhancing the infrastructure for mental health care, and providing training opportunities for specialists are necessary. Additionally, in response to the ageing society, promoting active ageing measures such as caregiving prevention to maintain physical function, advancing geriatric medicine, and reforming the healthcare system for early detection and treatment of diseases through health check-ups should be considered. Furthermore, examining appropriate institutional frameworks to meet future caregiving needs and starting pilot programmes in urban areas could be considered.

Second, enhancing international cooperation is vital. Strengthening cooperation with countries that have already experienced ageing and facilitating the sharing of experiences and expertise is crucial. Furthermore, developing regional cooperation networks to address the social and economic challenges associated with ageing should be promoted.

4.7. Energy Industry

While pursuing economic growth, Viet Nam's energy demand has increased, with significant reliance on coal and oil imports. Dependence on energy imports has also risen, posing challenges to energy security. Additionally, from a climate change perspective, reducing carbon emissions and adopting renewable energy are imperative. Demand for coal and oil is anticipated to increase, particularly from the late 2030s to the 2040s. Addressing this requires urgent action for sustainable energy supply and carbon reduction.

Proposed responses to challenges in Viet Nam's energy sector include, first, promoting energy efficiency policies. To reduce energy consumption, especially in oil and electricity, the Vietnamese government should formulate policies to support and implement energy-saving action plans through obligations and incentive systems.

Second, transitioning from coal-fired to natural gas power generation is important. To address the increasing electricity demand, consideration should be given to converting the power source of coal-fired power plants to natural gas. This would reduce emissions and achieve sustainable energy supply.

Third, reducing energy import dependency is essential. To decrease the reliance on imported petroleum products, promoting the shift from petroleum to electricity and hydrogen in road transport is recommended. Achieving sustainable energy supply by decreasing energy imports is crucial.

Fourth, prioritising the development of renewable energy is crucial. The development of renewable energy sources such as wind power, solar power, and natural gas power, which combine system

safety and economic feasibility, should take precedence. This is a significant step towards ensuring sustainable energy supply and promoting decarbonisation.

Fifth, active participation in multilateral electricity transmission networks is recommended. The ASEAN Power Grid initiative being pursued in the ASEAN region aims to optimise investments on a regional scale, thereby reducing the development costs of transmission networks and accelerating the introduction of renewable energy. Participation in such initiatives is expected to contribute to Viet Nam's future decarbonisation efforts and the provision of affordable and stable electricity supply domestically.

Sixth, transitioning from coal to hydrogen is important. To align with global carbon neutrality efforts, utilising carbon capture and storage technology to produce hydrogen by capturing and storing carbon dioxide from coal is crucial. Constructing a hydrogen value chain network would secure a new source of energy exports. In this regard, further promotion of international cooperation, including collaboration with countries like Japan, is recommended.

Last, accelerating the adoption of carbon capture, utilisation, and storage (CCUS) technology is essential. Rapidly establishing policies and regulations for enhanced oil and gas recovery is necessary. Viet Nam, with the ability to store carbon dioxide in aquifers, could collaborate with the ASEAN region to accelerate the deployment of CCUS technology. Similar to the sixth recommendation, fostering international cooperation, including cooperation with countries like Japan, is crucial for promoting the development and implementation of this technology.

5. Conclusion

It is a viable vision to surmount these diverse challenges, attain sustainable economic growth centred around the circular economy and inclusive development, and continue comprehensive diplomacy while building upon the foundation of a socialist-oriented market economy. Progress, social justice, and the status of a high-income country by 2045 are within the realm of possibility if well-rounded and sustainable economic growth is achieved.

As we commemorate the 50th anniversary of diplomatic relations with Japan this year, collaborating with Japan, particularly in the realm of DX, holds promise in striving towards achieving high-income country status by 2045. Furthermore, collaborative endeavours are recommended in sectors such as the automotive industry, advanced agriculture, climate change, circular economy, and an ageing society. On the diplomatic front, Japan and Viet Nam both need to surmount a multitude of contemporary challenges. We are confident that the leaders and citizens of both nations will harness their wisdom to further fortify the elevated camaraderie and cooperation.