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Enhancing Inter-Firm Linkages through Clusters and Digitalisation for Productivity Growth

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Abstract: This paper examines the policies for industrial cluster development in Viet Nam. The first export processing zone was established in 1991. Since 1994, Viet Nam has focused more on developing domestic productive capacity and thus various types of industrial estates were established. The key actors in industrial cluster policy are the government, Prime Minister, ministries, provincial people's committees, and management boards of industrial and economic zones. The choice of industrial estate is often determined by factors such as geographic location, land, labour, infrastructure, industry, business environment, and incentives. Viet Nam has provided various incentives to industrial estates of various types, but the scope and extent of preferential policy support for firms in general and those operating in industrial and economic zones are rather modest. The industrial estates have contributed significantly to attracting foreign direct investment, to exports, to productivity improvement, etc. Looking forward, Viet Nam needs further efforts on industrial cluster development, including development of statistics, analysis of cluster policy impacts, and provision of FTA-consistent incentives.

Keywords: Industrial cluster; industrial zones; economic zones; incentives; Viet

Nam

JEL categories: L59; O14; O18

1. Introduction

Over the past 32 years, Viet Nam's Renovation (*Doi Moi*) has brought about remarkable socioeconomic progress. In 2008, Viet Nam surpassed the low-income threshold and became a lower-middle-income country. Viet Nam has also engaged more deeply with the regional and world economy. The economic structure has gradually shifted towards the non-state sector having a larger share, and a smaller share of the agriculture, forestry, and fishery industries. However, economic growth is still arguably based largely on the expansion of investment, utilisation of cheap labour, and production and export of raw materials and low value-added manufactured products.

There is a broad consensus in the literature that Viet Nam's ability to sustain this economic growth is being seriously challenged by its inadequate competitiveness. Viet Nam's comparative advantages, including an abundance of natural resources and cheap labour, are being exhausted. The more serious and intolerable consequences of macroeconomic instabilities, such as the economic crises in 2008 and 2011, indicate that the investment-based growth model will be difficult to sustain. Meanwhile, increasing analytical attention (e.g. Vo, 2007; Ministry of Planning and Investment [MPI], 2018; UNDP and MPI, 2019) has focused on Viet Nam's lag in productivity growth relative to its expectations and the growth of other countries in the region.

In 2011, Viet Nam embarked on a comprehensive programme of economic restructuring. Macroeconomic stabilisation has consistently been the top annual priority, so as to maintain a favourable environment for productivity-enhancing microeconomic reforms. Viet Nam also recognises that supply-sided reforms will help restore macroeconomic balances. In particular, enhancing the domestic production capacity will help alleviate the adverse development and impacts of trade deficits that materialised in Viet Nam during 2007–2010. New policy measures include efforts to simplify market entry conditions, reduce unnecessary regulatory burdens on firms, and facilitate linkages between domestic and foreign-invested firms.

This last area of policy efforts has attracted attention in recent years. To boost national and business competitiveness and help reduce the risk of macroeconomic instability, Viet Nam has recognised the need to develop industrial clusters efficiently, as demonstrated by the experiences of selected countries. International experience shows that effective industrial clusters enhance competitiveness (as geographical proximity creates economies of scale, helps cut down production costs, and encourages the sharing of information and other resources) by facilitating the upgrading of domestic technologies, restructuring regional economies, accelerating industrialisation and modernisation. generating jobs. and solving socioeconomic problems. As of 2014, there were already over 2,500 cluster initiatives in 75 countries at different stages of development. In 2008, the Asian Development Bank emphasised that 'development of cluster has become a hottest issue ever of the last decade in the field of enterprise competitiveness' (Ffowcs-Williams, 2011; Economic Competitiveness Group, Inc., 2010). In the context of tougher competition in world markets, promoting industrial clusters and supporting industries is of strategic importance for Viet Nam's long-term economic development.

Industrial parks and industrial clumps have contributed to Viet Nam's industrialisation and economic development to a significant extent. Nevertheless, the concept of industrial clusters is not yet localised. As of April 2019, Viet Nam had a number of economic zones, industrial zones or parks, high-technology zones (HTZs), border economic zones, concentrated information technology (IT) parks, high agricultural technology application parks, and handicraft villages, among others, each encompassing a subset of characteristics and/or objectives of industrial clusters. In this regard, *industrial estates* may be a better term to use, although the shift from industrial estates to industrial clusters requires more fundamental changes in mindset and policy. Yet, the vast heterogeneity of such zones already in operation and existing scattered policies give rise to the challenge of concretising a sufficiently comprehensive policy framework to develop industrial clusters.

Several aspects of the national context in 2019 and beyond may have a bearing on industrial cluster development in Viet Nam. First, Viet Nam already has a significant number of free-trade agreements (FTAs), with modest to ambitious market access commitments. Such FTAs may reduce the policy space to support domestic producers, while also undermining the attractiveness of operating in various industrial estates in Viet Nam relative to operating elsewhere. Second, the growing demand from foreign investors who want to establish or increase their commercial presence in Viet Nam (following the entry into force of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership [CPTPP] and increasing tension in global trade) may create the scale of economic activities needed to make industrial estates in the country feasible. Third, the rapid development of digital technology is significantly changing the way firms divide workloads, communicate, and organise transactions with one another in the value chains.

This paper examines the development of industrial clusters in Viet Nam, with the aim of proposing policy changes to leverage such development in the new context. The remainder of the paper consists of five sections. Section 2 provides the historical background leading to industrial estate development. Section 3 describes the main actors and their functions in industrial cluster management. Section 4 summarises the key policies to support industrial clusters and enhance linkages within clusters. Section 5 elaborates on the contribution of clusters to industrialisation. Section 6 concludes with some policy recommendations.

2. Historical Background Leading to Industrial Estate Development

Although the first industrial estate in Viet Nam was only established in 1991, it is useful to understand the context of economic reforms in Viet Nam before that. Following the initiation of *Doi Moi* in 1986, Viet Nam went on to implement successful economic policy reforms. The Sixth National Party Congress acknowledged the existence and role of the multi-sector economy, and emphasised the importance of broadening opportunities and choices for everyone to promote economic development and improve living standards. The Congress also affirmed the need to reform the country's economic management regime, abolish red tape, and establish a new regime in line with the objective rules and development level of the economy. Moreover, the Congress affirmed the importance of diversifying Viet

Nam's economic relationships and improving the effectiveness of foreign economic activities via trade and foreign investment.

Simultaneously, Viet Nam promulgated many policies related to expanding the production of consumer goods. In industrial production, Decision No. 217/HDBT of the Ministerial Council on reforms of socialist planning and business accounting for state-owned enterprises (SOEs) was promulgated on 14 November 1987. Pursuant to this decision, SOEs were permitted to have autonomy in production and business activities and independent accounting, and to use revenues to finance expenditures, with no loss compensation by the state. In late 1987, Viet Nam abolished controls on domestic trade, allowed the circulation of goods, and enhanced autonomy for SOEs. The country also ceased distribution at low prices for the majority of production means (except for some strategic inputs such as electricity, steel, cement, oil, and petroleum products).

Some decisions on agricultural development were also promulgated. The most notable of these was Resolution No. 10/NQ-TW of the Politburo, enacted in April 1988, on renovating economic management in agriculture. This resolution clearly acknowledged the autonomy of farmers as an economic unit in production and business and their intermediary role in rural agricultural production. Farmers have the right to buy, sell, and transfer production means, rights which were forbidden prior to 1986. Collective land was assigned to farmers for long-term use – 10–15 years if growing annual crops, and 50 years if growing industrial crops. Moreover, farmers are fully able to use land for rights purposes, for example, to inherit or lease land for one or more crops. The Land Law was approved in December 1987 and came into effect in 1988. While maintaining state ownership over land, the state acknowledges private land use rights.

Along with the domestic economic policy reforms, Viet Nam undertook a proactive open-door policy and international economic integration via trade and foreign direct investment (FDI) attraction. The Foreign Investment Law promulgated in December 1987 laid the first legal foundation for FDI activities in Viet Nam. In terms of market access, Viet Nam abolished a monopoly in trading rights, and has since 1988 permitted foreign-invested enterprises (FIEs) to undertake trade activities. The promulgation of Decree No. 57/ND-CP in 1988 marked a turning point for trade

liberalisation in the country. Accordingly, the right to freedom in foreign trade has been officially acknowledged.

2.1. 1989–1996

During 1989–1996, Viet Nam leveraged its efforts in market-oriented reforms. Key reforms were introduced in several areas, including agriculture, price management, exchange rate, state budget, trade, and financial policies. Despite the collapse of the Soviet Union in 1991 Viet Nam continued to pursue proactive international economic integration in this period. After re-establishing relations with international financial institutions such as the International Monetary Fund, World Bank, and Asian Development Bank in 1993, and signing the Framework Agreement on cooperation with the European Union in 1995, Viet Nam acquired full membership in the Association of Southeast Asian Nations (ASEAN) in July 1995. Furthermore, Viet Nam lodged an application for World Trade Organization membership in 1995, and applied for membership in the Asia-Pacific Economic Cooperation forum in 1996.

In this context, Viet Nam recognised the need to attract foreign investment and promote exports. Increasing foreign investment and export activities in turn translated into stronger ties between Viet Nam and the world economy. The first export processing zone (EPZ) (Tan Thuan EPZ) was established in 1991, and other EPZs were subsequently established during 1991–1994.

During 1994–1996, the trend of building industrial estates began to change. Specifically, Viet Nam focused more on enhancing domestic production capacity to support exports, especially industrial products. Various industrial zones were established, and some EPZs were also transformed into industrial zones. Still, by the end of 1996, FDI into Viet Nam was rather modest (Figure 1).

¹ For more details, see Dinh et al. (2009).



Figure 1: Foreign Direct Investment in Viet Nam, 1988–2018

Note: The number of projects is indicated in the right-hand axis.

Source: General Statistics Office.

2.2. 1997–1999

The 1997 financial crisis that occurred in many East Asian countries and its impacts have more clearly revealed the weaknesses of Viet Nam's economy. During this period, structural reforms (including regulatory and SOE reform) were sluggish and, more importantly, inconsistent. The Sixth Plenary Meeting in December 1997 emphasised the urgent priorities of ensuring financial and macroeconomic stability, and mitigating the unfavourable impacts of the regional financial crisis. Viet Nam also imposed temporary import bans and restrictions on some consumer goods in 1997 due to the sizeable current account deficit. In 1999, due to the enormous risk of deflation,² the government of Viet Nam implemented numerous measures, the most notable of which were stimuli of investment and consumption.

In this period, Viet Nam continued to popularise the development of industrial zones. At the same time, some high-technology parks and border economic zones were also established. Notable examples were the Mong Cai border economic zone in 1996 and Hoa Lac high-technology park in 1998. As discussed in section 5, the development of industrial estates did not help to improve the attraction of FDI in this period.

Viot Nom's lowest rate of inflation was

² Viet Nam's lowest rate of inflation was observed in 1999 (0.1%).

2.3. 2000–2018

This period witnessed drastic economic policy reform with an array of policies related to promoting SOE reform, private sector development, investment, and trade liberalisation, as well as deeper integration into the world economy. The legal framework for establishing a market economy was also improved. The turning point of reform in this period was the 2000 Enterprise Law,³ which enforces the freedom to do business as permitted in the 1992 Constitution.

The subsequent policy reforms involved the promulgation and implementation of the Enterprise Law in 2005.⁴ With this law, Viet Nam has for the first time promulgated a common legal document equally regulating enterprises under all forms of ownership. Similarly, the Investment Law, which was approved by the National Assembly in 2005 and came into effect on 1 July 2006 to replace the Foreign Investment Law and Law on Encouraging Domestic Investment, marked a major step towards improving the investment environment, with the aim of creating a more level playing field for domestic and foreign investors. In general, the promulgation of these laws reflects Viet Nam's commitment to establishing a favourable, equal environment in line with its socialist-oriented market economy and the requirements of the international economic integration process. The Enterprise Law and Investment Law were both revised in 2014 as Viet Nam negotiated the Trans-Pacific Partnership Agreement.

As part of its integration attempts, in 2000 Viet Nam signed a bilateral trade agreement with the United States, and this took effect in 2001. The country was also a signatory to various regional integration agreements such as the ASEAN-China Free Trade Area in 2002, ASEAN-Korea Free Trade Area in 2006, and ASEAN-Japan Comprehensive Economic Partnership in 2008. Viet Nam's accession as a member of the World Trade Organization in January 2007 reflected the country's efforts to achieve economic reform, and a deeper integration into the world economy. Economic integration slowed a bit in 2008–2009 due to the impacts of the global financial crisis, and in 2016–2017 after the United States withdrew from the CPTPP.

³ The Enterprise Law was promulgated in 1999 and took effect in 2000.

⁴ The 2005 Enterprise Law replaced the 1999 Enterprise Law, the 2003 Law on SOEs, and regulations on the organisational structures and activities of enterprises in the 2000 Foreign Investment Law.

However, Viet Nam has been actively negotiating, signing, and implementing FTAs, having entered into 16 FTAs as of March 2019.

The trend of popularising industrial zones continued until 2003. Since then, Viet Nam has piloted the model of open economic zones and coastal economic zones to establish regional growth drivers and build capacity for heavy industrial production in coastal areas. In this period, to increase the application of high technology in some key areas (e.g. IT and agriculture), Viet Nam also established new models of industrial estates, such as concentrated IT parks and high agricultural technology application parks. Together with institutional reforms and economic integration, Viet Nam's efforts to develop industrial estates have contributed to massive inflows of FDI, particularly since 2007 (Figure 1).

In 2008, Viet Nam issued Decree 29/2008/ND-CP defining industrial parks, EPZs, and economic zones. An industrial park is defined as 'a zone that specializes in the production of industrial goods or provision of services for industrial production, [and] has specified geographical boundaries'. An EPZ is 'an industrial zone that specializes in the production of export goods, provision of services for export goods production and export activities, [and] has specified geographical boundaries'. Industrial parks and EPZs are collectively referred to as industrial zones, unless they are specifically referred to. An economic zone is 'a zone that has a separate economic space with a particularly favorable investment and business environment for investors, [and] has specified geographical boundaries'. A bordergate economic zone is 'an economic zone that is located in a land border area where exists an international border gate or a major border gate'. Two things can be noted with regard to these definitions. First, all zones require certain conditions, order, and procedures to be established under the decree. Such requirements reflect the government's recognition of and intervention in these zones, and distinguishes them from traditional handicraft villages, which form naturally. Second, while the reference to specified geographical boundaries may be appropriate for eligibility for preferential treatment within the zones, it does not necessarily fit into the context of a digital economy where firms increasingly communicate via digital means and may not need to locate all of their operations within such zones.

The Decree 29/2008/ND-CP was replaced by Decree 82/2018/ND-CP in 2018. The definitions of industrial zone, industrial park, economic zone, EPZ, and border economic zone are fundamentally unchanged. However, the new decree also includes definitions for auxiliary industrial areas, eco-industrial parks, industrial symbiosis, and coastal economic zones. The two components mentioned above in Decree 29/2008/ND-CP were retained in Decree 82/2018/ND-CP. Developers still must comply with necessary conditions, order, and procedures to establish the zones; and the reference to specific boundaries is considered essential to grant enterprises preferential treatment. Yet, most technology firms found this surprising as they reportedly claim that a physical presence in the zones is neither necessary nor financially viable in the context of digitalisation.

In 2018, after years of studies, Viet Nam began more publicly discussing the trio-special economic zones (SEZ) model under consideration. The country has begun considering such SEZs because, despite marked economic growth driven heavily by the positive performance of industrial zones, EPZs, and economic zones, it has still been unable to close the development gap with other countries in the region. As an export-driven economy heavily reliant on the giant China, Viet Nam is facing growing competition pressure from not only China but also Cambodia, the Lao People's Democratic Republic, and Myanmar, which are emerging countries considered as possible replacements for low-cost manufacturing and assembly. This is challenging Viet Nam's ability to attract FDI to sustain its economic growth. This 'tricky' situation prompted the country's leaders and policy makers to create an ambitious plan for SEZs, in the hope that the SEZ model will help spearhead the country's fast-paced growth, and facilitate a shift to a knowledge economy based on the foundation of Industry 4.0 over the next few decades.

The proposed SEZ project aims to implement a 'breakthrough' model of policy testing and adoption in the three strategic locations of Van Don (Quang Ninh province), Phu Quoc (Kien Giang province), and Bac Van Phong (Khanh Hoa province). By facilitating transparent institutions, an outstanding business environment, and effective administration, the SEZ model is expected to accelerate economic development and reforms. More specifically, SEZs are designed to test and adopt new institutions with more freedom and less control, stimulate innovation,

create more jobs, and generate higher incomes for local people, thus boosting production and trade and leading to economic growth.

The draft Law on Special Administrative-Economic Units was designed to create a legal basis for the establishment, development, management, and operation of the three aforementioned SEZs and ensure that the best use is made of their regional potential and advantages. Citing a high level of concern for national security and sovereignty, the National Assembly agreed to delay the approval of the draft law to enable further and deeper analysis and consideration of the law, as it faced a number of controversial questions. In particular the law lacked a thorough analysis of costs and benefits, especially with regard to preferential policies related to land and land-attached assets in SEZs (e.g. a land lease term of 99 years instead of the 70-year maximum permitted under current regulations). Generous tax incentives, particularly for casinos and other gaming ventures and entertainment activities, also led to criticism of SEZs by sparking fear that this would generate unhealthy competition.

The idea of establishing SEZs in Viet Nam has been debated for a couple of years and is still highly controversial. Opponents of SEZs argue that the SEZ model is outdated and irrelevant to the current situation in Viet Nam, especially since Viet Nam has engaged in a high level of regional and international integration through a large number of FTAs, including new-generation FTAs such as the European Union-Viet Nam Free Trade Agreement (EVFTA) and CPTPP. In this regard, there seems to be a growing consensus among experts that the country should stick to carrying out fundamental and comprehensive institutional reforms, and focus on developing the private sector, including recognising the private sector as the basic economic sector, narrowing the state sector to a minimal level, and recognising and protecting private ownership of land. Opponents of the above-mentioned SEZ projects also voiced concerns about the huge amount of capital (about \$70 billion) required to develop the Van Don, Phu Quoc, and Bac Van Phong SEZs, which they fear will be a costly burden on the national economy. In this regard, it is necessary to examine whether the benefits brought by the SEZs outweigh the costs. No further news of or workshops on the draft Law on Special Administrative-Economic Units were reported in the first quarter of 2019.

3. Major Actors and their Functions

The key actors in the management of industrial zones and economic zones are the government, Prime Minister, ministries, people's committees (at the provincial level), and management boards of industrial and economic zones. According to Decree 82/2018/ND-CP, the government shall exercise uniform state management over industrial parks and economic zones nationwide on the basis of assigning specific tasks and powers to each ministry or sectoral administration, the provincial people's committee, and the industrial park or economic zone management board, as prescribed. It shall also be responsible for the direct formulation and implementation of the planning and proposal of the development of these industrial parks and economic zones; and shall promulgate policies and legal documents relating to industrial parks and economic zones.

The Prime Minister has several powers and responsibilities: (i) to direct ministries, sectoral administrations, provincial people's committees, and industrial park and economic zone management boards to implement laws and policies on industrial parks and economic zones; (ii) to approve and adjust development plans of industrial parks and economic zones; (iii) to grant a decision on investment policy with respect to investment projects under his or her jurisdiction; (iv) to grant a decision on the establishment and expansion of economic zones; (v) to approve and adjust general planning for the construction of economic zones; (vi) to grant permission for the expansion of and decrease in acreage as well as the transformation of approved land uses of industrial parks and functional areas of economic zones; and (vii) to direct the handling and settlement of difficulties and problems arising during the process of planning, investing in, establishing, operating, and managing the activities of industrial parks and economic zones, which fall outside the jurisdiction of ministries and sectoral administrations, provincial people's committees, and management boards of industrial parks and economic zones.

The MPI assumes the prime responsibility for helping the government perform uniform state management of industrial parks and economic zones. In doing so, the MPI is the focal point in coordinating with other ministries, sectoral administrations, and provincial people's committees in various tasks, including the following:

- formulating and adjusting development plans of industrial parks and economic zones, and submitting proposals to the Prime Minister for approval;
- (ii) drafting legal documents and policies on the development of industrial parks and economic zones and submitting them to competent state agencies for promulgation;
- (iii) providing guidance on the construction of eco-industrial parks;
- (iv) providing guidance on professional training and refresher's courses for the management boards of industrial parks and economic zones;
- (v) preparing plans for financial support from the central budget for investment projects on the development of industrial park infrastructure at localities facing socioeconomic difficulties and extreme difficulties under the Prime Minister's decision, and plans for financial support from the central budget for investment in the development of technical and social infrastructure systems in economic zones according to the provisions of this decree, as well as providing a mechanism for mobilising other capital sources for investment in the development of infrastructure of industrial parks and economic zones;
- (vi) formulating and organising the implementation of national programmes and plans for the promotion of investment in industrial parks and economic zones; and
- (vii) building and managing information systems of industrial zones and economic zones, issuing periodic report forms or templates, and providing information on industrial parks and economic zones for relevant governmental agencies.

Other ministries assigned specific tasks under the coordination of the MPI include the following:

- (i) The Ministry of Home Affairs provides guidance on the establishment, classification, ranking, and reorganisation of the management boards of industrial parks and economic zones, among others.
- (ii) The Ministry of Finance formulates regulations on financial mechanisms and policies applicable to the management boards of industrial parks and economic zones, and public non-business units that act as the owners of investment projects relating to the development of infrastructure of industrial parks, as well as economic organisations related to industrial parks or economic zones in uniformity with the provisions of law, among others.
- (iii) The Ministry of Construction must (a) promulgate regulations guiding the management boards of industrial parks and economic zones to perform state management over the construction of technical infrastructure, and construction works in industrial parks and economic zones; (b) build and develop housing, cultural, and sports facilities for employees in industrial parks and economic zones; (c) perform urban management and development tasks at economic zones; and (d) provide instructions for construction standards for eco-industrial parks, among others.
- (iv) The Ministry of Industry and Trade must (a) perform state management of industry, import, export, and commercial activities in industrial parks and economic zones; (b) direct and orient the development of industries in industrial parks and economic zones according to approved strategies and plans for regional and national industrial development; (c) authorise the management boards of industrial parks and economic zones to grant certificates of origin of goods produced in industrial parks or economic zones when they fully satisfy conditions for authorisation; (d) provide guidance on the granting of permits and papers of equivalent value to the trading of goods under the specialised management of the Ministry of Industry and Trade; and (e) provide instructions for the purchase and sale

- of goods and activities directly related to the purchase and sale of goods to foreign-invested economic organisations and foreign investors located in industrial parks and economic zones.
- (v) The Ministry of Natural Resources and Environment must (a) issue guides for the management and protection of the environment within industrial parks and economic zones; and (b) guide the reuse of waste, scrap, and abundant energy in eco-industrial parks under the ministry's regulatory authority.
- (vi) The Ministry of Science and Technology assumes the prime responsibility for (a) cooperating with and guiding local authorities in conducting technological inspections and evaluations, technological-level assessments, and the evaluation of technological transfer contracts in industrial parks and economic zones; and (b) guiding the reuse of waste, scrap, and abundant energy in eco-industrial parks under the ministry's regulatory authority.
- (vii) The Ministry of Culture, Sports and Tourism must (a) guide the management boards of industrial parks and economic zones to perform state management of tourism activities in economic zones; and (b) guide the management boards of industrial parks and economic zones to grant, re-grant, amend, supplement, and extend licences for the establishment of representative offices or branches in economic zones with regard to foreign tourist agencies.
- (viii) The provincial people's committees (a) assume prime responsibility for drawing up development plans of industrial parks and economic zones in localities under their jurisdiction; (b) grant decisions on the establishment and expansion of industrial zones; (c) decide on the use of state budget capital to help investors invest in technical infrastructure systems inside and outside the fences of industrial parks or economic zones; (d) promulgate specific preferential and incentive policies in accordance with the provisions of the law with respect to prioritising the recruiting and employment of local labourers, as well as highly qualified and skilled labourers; (e) provide vocational training for labourers working in

industrial parks and economic zones; (f) draw up plans for land intended for the construction of resettlement areas, housing, and social, cultural, and sports facilities for workers in industrial parks and economic zones; (g) provide investment support for the construction of dwellings for workers, resettlement quarters, and socio-technical infrastructure works in accordance with the provisions of the law; (h) support investment promotion, trade, and tourism; (i) support compensation and ground clearance to speed up the process of investment in and development of industrial parks and economic zones; (i) direct the appropriation of land and water surface areas, giving of compensation, site clearance, and resettlement; (k) implement procedures for the leasing or assigning of land in industrial parks or economic zones in accordance with the relevant laws; and (1) direct relevant organisations to prepare investment plans and organise the construction of technical and social infrastructure systems outside the fences of industrial parks or economic zones, to meet the development needs of industrial parks and economic zones, among others.

Notwithstanding the clear assignment of tasks and functions for management boards of industrial zones and economic zones at the local level, they must be authorised and guided by the concerned authorities. Areas requiring such guidance and authorisation include construction, environment, labour, trade, and land. As of 2018, however, the sectoral regulations do not or inconsistently guide such authorisation for these management boards. Thus, an overall guideline for implementing a single-window mechanism for industrial and economic zones is yet to materialise.

4. Policies to Support Industrial Clusters and to Enhance Linkages Within Clusters

In Viet Nam, 'genuine' and strong industrial clusters are still rare. As of 2018, there were three main categories of industrial clusters in Viet Nam: trade villages, trade streets, and 'resident' industrial clusters. The traditional trade village is a

primitive form of industrial cluster and has lasted for many years. According to the Ministry of Agriculture and Rural Development, as of June 2018 Viet Nam had 5,411 trade villages, of which more than 1,864 were traditional trade villages located countrywide. This figure represents a significant increase from that reported by the Viet Nam Trade Village Association in 2007 (2,017 trade villages). In 2017 alone, Viet Nam already had more than 2,000 handicraft enterprises. The trade villages created jobs for about 11 million employees in 2018, accounting for around 30% of labourers in rural areas. Hanoi's 36 trade streets are also early forms of industrial clusters for production and trade in Viet Nam. Finally, industrial clusters 'reside' in the main industrial parks like Thang Long Industrial Park (Noi Bai, Hanoi) (where the pioneering company is Canon [Japan]), Namura Industrial Park (Hai Phong), and specialised industrial parks such as Pho Noi textiles (Hung Yen) in the open economic zones (see also the Chu Lai Automobile Assembling and Production Complex, Truong Hai in the Chu Lai Open Economic Zone). Other areas where such clusters 'reside' include HTZs (such as Hoa Lac), industrial clumps such as the Duc Hoa Plastic Industrial Clump (Long An), and rural areas such as the agricultural industrial cluster in the Mekong Delta and fish farms in other coastal areas.

The majority of industrial clusters exist in the aforementioned forms and have a similar specialisation and geographic concentration of economic activities. All of these formed and developed naturally as opposed to arising from the deliberate intervention of the government and local authorities. This is particularly evident for trade villages. As for other modern forms of industrial clusters, this is also true. The successful case of the Thang Long industrial zone, which houses the pioneering firm Canon, resulted from initiatives by relevant ministries to attract FDI in general, not to build an industrial cluster for Bac Ninh intentionally. Conversely, Nomura industrial zone, which is also a top choice for Japanese firms, was the result of such targeted efforts. This paper focuses on evaluating industrial clusters operating either wholly or partially in industrial parks, or in industrial clumps as economic entities.

Relatively successful industrial clusters have also formed naturally, as a result of historic and socioeconomic conditions. For example, the Central Vietnam Tourism Cluster and Mekong Delta agricultural products cluster formed in such a way. Initial observations show that clusters of light industries or processing and export industries

(e.g. textiles, footwear, processed food, and electronics) are concentrated in the south, especially the area around Ho Chi Minh City; while clusters of heavy industries (e.g. automobile mechanical, electronic and refrigerating, and shipbuilding) tend to be located in the northern region around Hanoi and the surrounding provinces. Historical factors are the primary major cause for this distribution; for example, given the dominant role of SOEs in heavy industries since the central-planning period, this sector largely produces import-substituted products and in the north, while the south has emerged as a centre for manufacturing exports thanks to dynamic and market-oriented reforms. Thus, the south is also home to a number of services clusters such as logistics and ports (Vietnam Competitiveness Report, 2010).

5. Factors Under Consideration by Foreign Investors

Foreign investors must consider several factors when deciding at which industrial park in Viet Nam to locate their operation. According to Dezan Shira & Associates (2017), such factors typically include geographic location, land, labour, infrastructure, industry, business environment, and incentives.

In term of geographic location, there is evidence of geographical concentration of industries. A specific industry may attract more enterprises to some regions than elsewhere. For example, garment and textile manufacturing is concentrated in both the north and the south, while footwear and furniture manufacturing are both concentrated in the south. Proximity to key destinations such as airports, seaports, major cities, main highways, and borders are also important factors for consideration, especially with regard to key destinations and connections for the import of inputs or export of goods. Many industrial zones are established near national highways with convenient access to airports, seaports, and rail stations for easy transport. Low-cost labour has also been a key attraction for foreign investors so far. Under the current laws, the minimum wage varies from \$100–\$128 per month, depending on the region.

Above all, infrastructure is a deciding factor for the success of an industrial zone. Typical traits that determine the attractiveness and potential success of an industrial zone include quality factory buildings and warehouses, stable sources of

electricity and water supply, the availability of wastewater treatment plants, garbage disposal systems, fire prevention systems, improved telecommunications, easy access to banks and post offices, logistics services, and accessible internal roads. Recognising this, Viet Nam has for long made dedicated efforts to improve infrastructure, particularly electricity and environmental facilities. In particular, Viet Nam has significantly improved access to facilities, as reflected by an increase of 108 positions in the Getting Electricity indicator of the World Bank's *Doing Business* rankings during 2014–2018.

In term of industries, Dezan Shira & Associates (2017) indicate that the Northern Key Economic Zone, including Hanoi, Hai Phong City, and the provinces of Bac Ninh, Ha Tay, Hai Duong and Hung Yen, focuses mainly on agricultural products. The Central Key Economic Zone, including Da Nang City and the provinces of Binh Dinh, Thua Thien Hue, Quang Nam, and Quang Ngai, focuses more on the marine economy. The Southern Key Economic Zone, including Ho Chi Minh City and the provinces of Binh Duong, Ba Ria-Vung Tau, Dong Nai, Tay Ninh, and Binh Phuoc, concentrates on the development of commerce, exports, technology, services, and telecommunications.

Tax incentives for industrial zones also attract the attention of both domestic and foreign investors. Such incentives take various forms, including exemptions from or reductions of corporate income tax, value-added tax, and import tariffs for certain periods of time, taking into consideration business lines and location of enterprises.

6. Key Policies to Promote Firms' Presence and Operation Within Industrial Zones and Economic Zones

The establishment of industrial zones and EPZs in Viet Nam has been closely linked with the *Doi Moi* of the country initiated by the Sixth Congress of the Communist Party of Viet Nam in December 1986. Since then, Viet Nam has persistently implemented an open-door policy, encouraging foreign investment by creating a favourable investment and business environment and gradually improving infrastructure. Following the breakthrough introduction of the Foreign Investment

Law in late 1987, the country's first EPZ was established in 1991 following the promulgation of Decree No. 322/HDBT on the establishment of EPZs dated 18 October 1991. This ushered in an era of booming development of a series of industrial, export-processing, high-technology, and economic zones together with increased inflows of foreign investment.

Key regulations on promoting industrial park development have been promulgated since 1997, when the government issued Decree No. 36/ND-CP on the regulation on industrial parks, EPZs, and HTZs. Since then, the legal framework has improved significantly with the promulgation of (i) the Prime Minister's Decision No. 1107/QD-TTg (dated 21 August 2006) approving of the development of industrial parks in Viet Nam up to 2015 and orientation of those parks up to 2020; (ii) Government Decree 29/2008/ND-CP (dated 14 March 2008), which amended regulations on industrial, export-processing, and economic zones; and (iii) the Prime Minister's Decision No. 43/2009/QD-TTg (dated 19 March 2009), which issued mechanisms to provide financial support from the central budget for investment in the construction of infrastructure of industrial parks in localities facing difficult socioeconomic conditions. Following the monitoring report of the Standing Committee of the National Assembly in 2012, in the same year the Prime Minister issued Directive 07/CT-TTg on disciplining management and enhancing operational efficiency of economic zones, industrial zones, and industrial clumps.

Decree 82/2018/ND-CP provided various incentives for firms in industrial and economic zones. An industrial park is an area given investment preferences or incentive policies that are applied to those present in the list of areas facing socioeconomic difficulties as per the laws and regulations on investment. Any industrial park established at areas in the list of areas facing socioeconomic difficulties shall be given incentive policies applied to those present in the list of areas facing extreme socioeconomic difficulties as per the laws and regulations on investment. Meanwhile, an economic zone is an area given investment preferences or incentive policies that are applied to those present in the list of areas facing extreme socioeconomic difficulties as per the laws and regulations on investment. Specifically, foreigners and Vietnamese expatriates who work, invest, or do business in any economic zone, and their family members, may be granted a multiple entry

visa whose term conforms to the law; may temporarily or permanently reside in that economic zone; and may stay in Viet Nam under the provisions of the laws on the residence, exit, and entry of foreigners in Viet Nam. Any purchase, sale, payment, transfer, or other transaction between organisations and individuals doing business within border-gate economic zones may be effected in the currency of Viet Nam (dong), China (renminbi), Laos (kip), Cambodia (riel), or other freely convertible foreign currencies in accordance with the law on foreign exchange control.

For investment projects on the manufacturing of products in auxiliary industrial parks, incentives include (i) tax incentives with respect to corporate income tax, export and import duty, and other support, as prescribed in the laws on taxes and development of auxiliary industries, as well as other relevant legislation; (ii) assistance by competent authorities in implementing procedures for the acceptance of incentives within 30 days when the project involves the production of products on the list of auxiliary industrial products the development of which is prioritised as prescribed in legislation on the development of auxiliary industries; and (iv) priority to receive startup assistance and support for small and medium-sized enterprises (SMEs), and to participate in training and other programmes implemented by state regulatory authorities.

For enterprises in eco-industrial parks, incentives include (i) priority in borrowing preferential loans from the Vietnam Environment Protection Fund, the Vietnam Development Bank and funds, financial institutions, and domestic and international donors to construct technical infrastructure of industrial parks, implement cleaner production methods, and use resources and industrial symbiosis solutions efficiently; (ii) priority to participate in technical assistance and investment promotion programmes organised and managed by state regulatory authorities; and (iii) priority in providing information related to the technology market and cooperating in effecting industrial symbioses within the scope of production and business activities of these enterprises.

Although the list of incentives appears long, the scope and extent of preferential policy support for firms in Viet Nam in general and those operating in industrial and economic zones are rather modest. According to Nguyen et al. (2015), Viet Nam still retains some policy space for measures (including safeguard and

certain investment measures) to support the development of the food processing sector. Sanitary and phytosanitary measures and technical barriers to trade measures are viable, but less so than pure trade measures. As in the case of the electronics industry, Viet Nam can still extend support to SMEs from the SME Development Fund for labour training, research and development support, trade promotion, and market development, among other things. Still, the policy space for protective tariffs has been reduced. Meanwhile, subsidised credit support can only be provided for agricultural and fishery firms at the production stage, not at the food processing stage. Thus, Viet Nam's ability to protect its less efficient domestic enterprises from far more efficient competition with FIEs in the domestic market has been greatly reduced.

A legal framework for industrial clump development was promulgated under the Prime Minister's Decision No. 105/2009/QD-TTg (dated 19 August 2009), which included regulations on industrial clump management. This decision defined an industrial clump as a concentration of businesses, facilities for small industries and handicrafts, and services for production industries, small industries, and handicrafts. Moreover, industrial clumps have defined geographical boundaries and no inhabitants, and are established directly by the people's committees of provinces and cities under the central government. The decision stipulates that an industrial clump shall not exceed 50 hectares (ha), or 75 ha after expansion.

According to Article 3 of Decision No. 105, the major objectives of the establishment and development of industrial clumps in Viet Nam are to attract and relocate SMEs, cooperatives, and household businesses to invest in production and business; facilitate the improvement of infrastructure; promote production and business; overcome environmental pollution; and enhance the application of advanced technologies. Notably, Decision No. 105 for the first time encouraged enterprises to produce the same group of products in an industrial clump; such enterprises include those operating in the processing of agro-forestry and fishery products, the production of products and components, and the assembly and repair of machinery and equipment for agriculture and rural areas, as well as supporting industries.

7. Contribution of Clusters to Industrialisation

The development of Viet Nam's industrial estates, particularly industrial zones and parks and EPZs has played a crucial role in contributing to the rapid growth of Viet Nam's economy since 1986. Thus far, Viet Nam has established 326 industrial zones covering a total land area of 93,000 ha. Of these zones, 250 are already operational with an average occupancy rate of 73%, while the remaining industrial zones are under site clearance or under construction. Viet Nam has also established 17 coastal economic zones covering a total land and water area of 845,000 ha (not including Ninh Co Economic Zone in Nam Dinh province, which was included in the planning of economic zones but has not yet been established). In addition, Viet Nam has established 27 cross-border economic zones to boost trade and business activities between Viet Nam and neighbouring countries, especially China. According to the MPI, the volume of FDI poured into Viet Nam's industrial parks and economic zones in 2018 alone reached over \$8.3 billion. By the end of 2018, the country's industrial parks and economic zones had attracted more than \$145 billion from roughly 8,000 FDI projects. Each year, industrial parks and economic zones account for about 35%–40% of added capital of FDI projects in Viet Nam.

The policy promoting the development of industrial estates has been proven to work, at least based on general statistics. Attracting investment in industrial parks and EPZs has become markedly more efficient, with the average investment rate per hectare and occupancy rate of industrial parks increasing over time. Data from the MPI show that the investment rate increased from \$2 million/ha in 2005 to \$3.5 million/ha in 2012, to about \$5 million/ha in 2016; and the occupancy rate of operating industrial parks increased from about 65% in 2011, to 67% in 2015, and 73% in 2017. In particular, industrial zones and EPZs have contributed positively to the socioeconomic development of localities, created jobs, and significantly boosted state budget revenues. In 2017, the total revenue of industrial parks, economic zones, and EPZs exceeded \$160 billion, an increase of 11% compared to 2016; export turnover reached \$119 billion, equivalent to 56% of the country's export turnover; and industrial estates contributed more than \$3.4 billion and created more than 3.2 million jobs.

Notwithstanding several decades of development, foreign direct investors still share a common view that industrial zones and EPZs offer a second-best solution to help them to overcome bureaucratic red tape and other barriers to gain access to land and infrastructure. Regulations applicable to industrial zones, EPZs, and HTZs were designed and have been amended over time to make land acquisition easier and supply infrastructure, and have clearly proved beneficial to foreign investors. In terms of preferential policies, the policy on land and support for ground clearance has brought substantial benefits to attract foreign investors to industrial zones, EPZs, and economic zones. This is because the government has granted foreign investors favourable policies for land rents along with long usage times, thus helping to gain the investors' trust by making it easier for them to access land and reducing cumbersome administrative procedures.

Although it is hard to analyse the productivity of firms on the industrial estates, this can be proxied by the productivity of FIEs. At the aggregate level, when looking at labour productivity by the ownership form of the enterprise, the SOE sector and FIEs appear to have higher productivity than non-SOEs. This argument holds irrespective of whether the productivity is measured in terms of average turnover per employee or average added value of an employee.

Table 1: Level and Growth of Productivity by Ownership Form

(D million)

		2006	2008	2010	2012	2014	Average growth 2006–2014 (%)
0 11	Value added per employee	120.36	104.16	129.12	105.8	130.65	1.07
Overall	Turnover per employee	639.19	754.98	803.68	729.91	759.02	2.34
SOEs	Value added per employee	185.65	182.11	251.25	272.72	302.7	7.88
	Turnover per employee	729.11	900.26	1236.9	1299.5	1147.9	7.18
N	Value added per employee	68.18	60.459	78.407	66.678	86.454	3.35
Non-state	Turnover per employee	583.45	750.82	714.58	647.1	47.1	2.64
FIEs	Value added per employee	166.41	154.4	181.76	123.04	161.02	-0.41
	Turnover per employee	663.88	658.57	736.72	659.66	724.86	1.15

FIE = foreign-invested enterprise, SOE = state-owned enterprise. Source: CIEM (2018).

In terms of the ability to supply parts, supporting industry enterprises within Viet Nam can generally only meet a very small part of the manufacturing industry's demand. According to the Ministry of Industry and Trade, the motorcycle industry has the highest rate of domestic content (up to 85%-90%). Meanwhile, domestic support enterprises can only meet about 15%-25% of component demand for automobile production, about 20% for synchronous equipment production, about 40%-60% for agriculture and industrial machine production, 20% for synchronised machines production, and only about 10% of the high-technology industry's demand. Similarly, only about 20%–25% of the raw materials for the footwear industry can be supplied locally. In electronics, the rate of local content is only about 5%-35%, depending on the area (e.g. 30%-35% in consumer electronics; and 15% in electronics, informatics, and telecommunications). Samsung has already announced demand for 170 products, and Toyota also announced the need for hundreds of parts to supply partners, but the supporting industry enterprises of Viet Nam could not meet this demand. Similarly, Intel's investment project in the Ho Chi Minh City Hi-Tech Park has nearly 100 suppliers, but only 18 are domestic enterprises.

Table 2: Utilisation of Local Parts and Inputs by Products (%)

	Share of local inputs	Share of local electronic inputs	Share of local inputs in plastic and rubber
Motorcycle	85–90	40	95
Automotive	15–40	40	15
Synchronised equipment	20	-	-
Agricultural machinery	40–60	-	-
Industrial machinery	40	-	-
High technology	10	-	5
Electronics	-	-	20
Household electronic appliances	-	30–35	-
Informatics and telecommunication	-	15	-
Specialised electronics products	-	5	-

Source: Ministry of Industry and Trade (2015).

The level of participation of domestic supporting enterprises in the supply chain for FIEs is still modest. Most domestic supporting enterprises are tier-3 or tier-4 suppliers, mainly providing simple products and low-value components and supplies (e.g. packaging and simple details). Only 29 of Samsung Vietnam's domestic enterprises are direct suppliers (tier 1), and 136 are tier-2 suppliers, accounting for a very small proportion of the total number of suppliers. Among the tier-2 suppliers, only three are electrical-electronic parts enterprises, while the rest supply plastic-mechanic inputs (102 enterprises) or materials, supplies, and spare parts (31 businesses).

Table 3: Number of Local Suppliers for Samsung Vietnam in 2017

	Total	Electrical/electronics	Mechanics, plastics	Inputs, materials, and spare parts
Tier 1	29	-	-	-
Tier 2	136	3	102	31

Source: Samsung Vietnam (2017).

8. Limitations and Challenges Facing the Future Development of Industrial Estates

Despite a quite impressive performance over time, the development of industrial estates continues to face many limitations and challenges. Some of the major difficulties are as follows:

- (i) The planning of industrial parks and processing zones in some localities is still based on investors' proposals, lacks long-term perspective, and does not synchronise with technical and social infrastructure planning. This 'careless' approach has been narrowing opportunities to attract FDI, limiting healthy competition and the development vision of industrial parks and EPZs under consideration.
- (ii) The quality of many industrial estates did not meet the requirements for attracting investment in high-technology sectors and fields. Some projects in industrial zones and EPZs have a high level of technology content but did not meet the requirements for technology transfer, thus limiting knowledge sharing and spillover effects beneficial to domestic enterprises.

- (iii) The development of industrial parks and EPZs mainly follows a multisectoral approach, and fails to focus on strengthening links in the production and consumption of products among enterprises both within the zone and in other industrial parks and EPZs to develop large-scale and concentrated production and increase the added value of outputs.
- (iv) The quality of human resources in industrial parks and EPZs remains limited, making it difficult for FDI firms to recruit enough skilled workers. A significant proportion of workers in industrial parks and EPZs have low qualifications and skills and fail to meet the enterprises' requirements.
- (v) Land acquisition for industrial use in industrial zones, EPZs, and HTZs continues to pose a substantial concern for both policy makers and affected stakeholders despite several amendments of the related regulations. Current methods of land transfer for industrial use have proved inefficient, creating disparity with respect to who can legitimately access what land and resulting in some worrying signs of resentment among affected farmers. In this regard, it is necessary to carry out a thorough review and revise the land policy to support a long-term solution establishing clear land use rights to be traded readily and transparently in the market.
- (vi) Downgraded infrastructure in industrial zones and EPZs poses a substantial threat that can lead to slowing FDI inflows in Viet Nam. This is worrying because enterprises operating in these industrial zones and EPZs have to meet sustainable development and social responsibility standards in strict export markets, including those under the newgeneration FTAs (e.g. EVFTA and CPTPP). Many firms in the industrial zones and EPZs in Ho Chi Minh City have realised the need to enlarge their factories and increase production capacity but have failed to do so because either the industrial zones and EPZs were filled up or the rent was too high compared to surrounding areas.

- (vii) Outside the industrial zones and EPZs, overloaded infrastructure (typically involving worsening traffic jams) has also been problematic for investors, leading to increased production costs and reducing enterprises' competitiveness. There is an obvious lack of investment in building support infrastructure for workers such as schools, dormitories, and hospitals, thus deepening the situation of worker turnover and affecting the enterprises' performance.
- (viii) In addition, the development of industrial production and industrial zones so far has brought significant challenges such as environmental pollution, inefficient use of resources, and inadequate application of green technologies, thus causing negative impacts on residents' livelihood. To help address these problems, the government has prioritised the establishment of eco-industrial parks, which can be considered a move towards sustainable development with regard to industrial zones in Viet Nam.

9. Policy Recommendations

The above discussion shows that Viet Nam has already made significant progress in terms of formulating and implementing policies to promote the development of various industrial estates. There are already a large number of industrial zones, economic zones, and traditional handicraft villages. However, such industrial estates continue to lag far behind the anticipated model of industrial clusters based on international experience. Accordingly, Viet Nam should focus on the following policies:

First, Viet Nam must develop sufficient statistics to assess the development of industrial estates comprehensively and quantitatively. It is necessary to complement gross domestic product growth with different sustainable development criteria, such as the level of advanced technology, application of environmentally friendly and energy-saving technologies, and the effectiveness of social security programmes implemented at the localities, especially those where various types of industrial estates are present. On this basis, Viet Nam can set out feasible policy targets for industrial cluster development.

Second, Viet Nam should conduct rigorous analysis of the impacts of industrial parks, clumps, clusters, and supporting industries on industrial development, competitiveness, and linkages among enterprises and institutions operating inside and outside the industrial estates. To create a solid foundation for improving the country's legal framework and policies, it is important to review and evaluate (i) the performance of the concentrated zones and supporting industries; (ii) level of industrial agglomeration; (iii) links between participating stakeholders in the industrial cluster (enterprises, locality, research institutes, business, and industry associations (e.g. co-sponsors), as well as between industrial clusters and industrial parks, industrial clumps, and supporting industries; and (iv) the degree of participation of Vietnamese businesses in global value chains and production networks.

Third, while no new industrial estate should be established, Viet Nam should work to transform existing ones based on the international model of industrial clusters. It is essential to enhance the awareness of party leaders, politicians, policy makers, researchers, and businesses about the importance of such clusters for improving competitiveness and economic growth through workshops and training courses within the country and abroad, as well as through mass media. More importantly, the risk of possible government failures that could hinder coherent policy measures should be clearly communicated (United Nations Industrial Development Organization, 2011). Viet Nam should also set up a system of FTA-consistent financial incentives for the clusters' formation and development, including tax preferences, financing/co-financing schemes, and mechanisms for evolving the clusters' stakeholders, including local and foreign-invested leading companies, suppliers, and research and business associations.

There should be greater incentives for investors to form potential business links with industrial parks that are not completely filled or remain empty, as well as for businesses to participate in industrial clusters. This should avoid a failure to attract relevant companies to a cluster due to pressure to fill up the cluster to cover initial investment costs. An effective measure is to give developers first preference as soon as they have successfully attracted related businesses (especially leading companies)

and organisations of potential network into the cluster (through tax rebates or other incentive mechanisms).

Viet Nam should also consider enhancing conditions for industrial clusters by supporting the provision of common services and creation of business links. On the one hand, the country could enhance the capacity, size, and skills of suppliers (mainly SMEs) by promoting business development services for SMEs, providing brokerage services and forums between suppliers and purchasers, collecting general information about the market, coordinating goods procurement, setting technical standards, and building an effective export network. On the other hand, the country could strengthen external links (FDI and export) by facilitating branding and marketing for clusters and regions, supporting investors in the clusters, providing market information on international orientation, seeking partners, and supporting firms in moving up the value chain. Viet Nam may also promote the development of skilled human resources in strategic sectors by collecting and disseminating information about the labour market, providing both academic and vocational training in specialty areas, supporting cooperative links among business and educational institutions, and creating educational opportunities to attract students to the region.

Fourth, there is a need to revise the policies and planning of supporting industries, industrial zones, and clumps, while also attracting more investors, especially those operating in supporting industries and FIEs. Long-term (10-year) forecasts should be undertaken at the demand level in industries to ensure economies of scale; and an appropriate system of incentives should be defined to attract investors to supporting and strategic industries. Importantly, more attractive encouraging mechanisms should be studied and provided to FIEs investing in supporting industries, especially multinational corporations and MTCs, taking into account their global production network, global investment strategy, and the country's industry-specific conditions.

Policies to attract FDI should be renewed to establish requirements for the transfer of certain kinds of technology from FIEs to local companies, as well as regulations on energy saving, environment pollution, and national security relating to

FDI investment projects. In short, in the coming years, Viet Nam's FDI-attraction strategy should focus on enhancing the quality of the country's economic growth.

A proper support mechanism using the state budget should be provided to promote the transfer of appropriate technologies into Viet Nam by sector, technology type, and development stage. Further, a mechanism and policies should be developed to support technology transfer in high-technology supporting industries, pilot production by supporting industries, and the research and application of advanced technologies in supporting industries in Viet Nam.

Finally, Viet Nam should formulate and implement a new and friendly policy to develop e-commerce and the digital economy, and facilitate digital transformation with the aim of establishing a favourable ecosystem for the digitalisation of people and businesses. The legal framework for e-commerce (especially business-to-business) should also be improved with a comprehensive system of regulatory documents, to avoid restricting the free and sound development of e-commerce and e-transactions among firms. The country should also regularly review the legal framework, policies, and performance results for e-commerce compared to its FTA commitments, especially with respect to the new FTAs (e.g. CPTPP and EVFTA), as well as the impact of regulations on e-commerce and data flows, and buyer protection after sales, among others. Finally, the country should solidify safety and security infrastructure for e-commerce by establishing e-commerce transaction management and monitoring systems, a credit rating for e-commerce websites, and mechanisms for resolving disputes and handling violations in e-commerce (such as online dispute resolution).

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