

Domestic Enterprises in Supply Chains of Multinational Corporations: Vietnam Case Study

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Abstract—Vietnam’s international integration has also changed rapidly with the trend of gradually entering the global supply chain (GSC) and global value chain (GVC) that help create a powerful dynamic for national economic development. However, the main activities of the manufacturing subsidiaries of reputable MNCs located in Vietnam often specialize in the final product assembly (final assembly schedule-FAS). Correlatively, some Vietnam’s domestic enterprises (VDEs) are engaged either in outsourcing, or become MNC suppliers, but their position in the SCs is unstable. In this article, synthesis methodology and framework of analysis were used to clarify the status of Vietnam’s suppliers and their limited power in buyer-supplier relationships and to make some recommendations that may be useful to related parties. The article also provides an overview of the unprecedented impacts of the COVID-19 pandemic on Vietnamese businesses, and the appropriate responses to reshape and strengthen SCs for production in VietNam.

Keywords— supply chain, domestic supplier, manufacturer-supplier collaboration, global value chain, COVID-19 pandemic, supply chain disruption.

1. Introduction

The supply chain (SC) is not a new concept, but an integral part of all business sectors since trade began years ago, with the example of the ‘Silk Road’ considered as a trade route and SC connecting Asia, Europe and Africa [1]. It includes purchasing and securing input materials for the production process. Ongoing with production development process and international integration

the concept of the SC is understood more broadly and involves multiple stages, of which purchasing is just one of them. In [2] have expressed a viewpoint that SC consists of all parties involved, directly or indirectly, in fulfilling the customer’s requests. It includes not only the manufacturer and suppliers, but also transporters, warehouses, retailers and even the customers themselves.

Since the 1990s Vietnam has attracted record foreign direct investment (FDI) and made spectacular progress in economic development due to geographically advantageous location, open policy, improved business environment and relatively low labor cost. According to Ministry of Planning and Investment (MPI), by December 20th, 2019, the whole country has had 30,827 valid projects with a total registered capital of USD 362.58 billion. The accumulated realized capital of FDI projects was estimated at USD 211.78 billion, equaling 58.4 % of total valid registered capital [3, 4].

The experience benefited from the development of East Asian and Southeast Asian countries was an advantage that helps Vietnam to shape and develop successfully its the export-led growth economy. In 2019, the value of exported goods reached USD 264.3 billion and doubled as compared to 2013, when the export proportion of foreign-invested enterprises (FIEs) accounted for 70 %, making twice as much compared to that of VDEs [5].

Table 1. Export volume from 2013 to 2019 by type of enterprise (USD billion)

Year	Total volume	Foreign invested enterprises		Domestic enterprises	
		Total	Share (%)	Total	Share (%)
2013	132.033	80.924	61.3	51.109	38.7
2014	150.217	93.956	62.6	56.261	37.4
2015	162.017	110.645	68.3	51.375	31.7
2016	176.581	123.874	70.2	52.707	29.8
2017	215.119	152.549	70.1	62.570	29.9
2018	243.697	171.767	70.5	71.930	29.5
2019	264.267	179.166	67.8	85.101	32.2

The problem posed currently is that although the export value seems to be high, however, the benefits gained from exports are not commensurate. For example, depending on foreign suppliers, the textile and garment, footwear and electronics industries in Vietnam can now participate only at certain stages of production in the form of outsourcing for foreign brands or assembly of the final products of MNCs. Therefore, the manufacturing profitability of these sectors ranges from about 5 to 10 % [6].

The appearance of large investment projects from MNCs, such as Samsung, LG, Microsoft, Intel or Mitsubishi Heavy Industries, etc., in Vietnam gives golden opportunities to VDEs to participate in GSC. However, VDEs have not really taken advantage of these opportunities and are still struggling so as they have not been able to determine their position in the GVC. The Vietnam Chamber of Commerce and Industry (VCCI) assessment shows that VDEs' participation in the SC of production networks and GVCs is still low compared to those in other Southeast Asia economies. Specifically, only 36 % of VDEs could participate in the production network, while this proportion in Malaysia and Thailand was 60 %; only 21 % of Vietnamese SMEs participate in the GVCs compared to 30 % in Thailand and 46 % in Malaysia. The majority of VDEs can get involved only in assembly, outsourcing and supply of spare parts, but are not engaged in the production of key final products.

Therefore, balancing the manufacturer-supplier relationship between VDEs and FIEs and powering domestic suppliers are an instant issue of Vietnam economy. To participate more deeply in the SCs and bring higher profits is considered as urgent requirement for VDEs at the current development stage.

The COVID-19 outbreak has brought unprecedented challenges, and has had significant impacts on Vietnam's economic development in 2020 and the medium-term period. It also sets out the task of reshaping the SCs to ensure SC sustainability and uninterrupted production and business of the country.

2. Literature Review

Buyer-supplier relationships play an important role in SC management [7], where the balance of power among the parties is a decisive factor in the success of manufacturer-supplier collaborations. One company's dominance over another is a function of relative dependence – that is, the difference between a company's dependence on its partner and its partner's dependence on the company [8]. In [9] repeatedly affirmed that dominant companies in the SC can not only create dependent suppliers, but they also really seek to gain a dominant position.

The research issues such as procurement strategies, SC and logistics, organization and SC structure, theoretical framework for buyer-supplier relationships are provided by [10], and these are considered as core issues related to sourcing, purchasing, supplier relationships and partnering, supplier selection, etc. A prior research of [11] suggested that relational capabilities enhance firms' competitive advantages. In [12] presented the Diamond Model with four determinants of national competitive advantage, and stated that the third broad determinant of national advantage is domestic presence of related and supporting industries (SIs) that are internationally competitive. In Vietnam, the collaboration between the domestic suppliers and MNC manufacturers in most cases is understood as a supply relationship and SC related activities between the supplier and the manufacturer. In essence, this is the link between the two parties, in which domestic SI enterprises act as suppliers to other MNC manufacturers. The main activity of this relationship is the purchase of input goods and raw materials for business. Besides, there are also mutual activities between the two parties to build a sustainable, long-term supply relationship. In [13], investigating the role of SI in the manufacturing sector in Vietnam, also pointed out the relationship between the SI development and the VDE responsiveness in the SCs. The suppliers have gained the advantages when they are in close linkage that helps create a specialized cluster of SI.

The theoretical and practical aspects of the above studies confirmed the importance of downstream industries and SIs in the manufacturer-supplier relationship, as well as in enhancing the competitiveness of domestic suppliers. Most of Vietnamese researchers have only raised detailed aspects in certain fields, but have not yet clarified the cause of the weakness of Vietnam's domestic suppliers. Therefore, issues related to strengthening the power of VDEs and enhancing the ability to participate deeply in SC and GVC need further research.

3. Method and Research Limitation

The longitudinal method was used in the study to examine the dynamic structure of a reasonable ratio between domestic suppliers and MNC manufacturers and to evaluate reciprocal manufacturer-supplier relationship, using data from Thailand and Malaysia as countries in Southeast Asia that have similar production activities in comparison to Vietnam. The methods of data collection and data analysis were also applied to determine the current situation of Vietnam's domestic suppliers and evaluate the impacts of SC disruption caused by Covid-19 pandemic on Vietnamese enterprises. Secondary data used in the

research was collected from international and Vietnamese sources officially published.

This study is aimed at examining the relationship between Vietnamese domestic suppliers and manufacturers (buyers) which are MNC subsidiaries located in Vietnam. The VDE status in SC was studied in context of SI development in Vietnam.

4. Research Findings The Weaknesses of VDEs

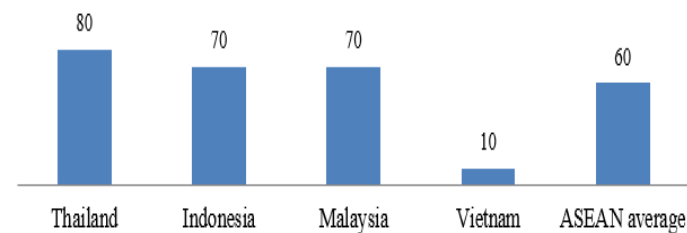


Figure 1. Average localization rate of the automobile industry in ASEAN countries (in %)

Currently, the number of Vietnamese suppliers who can participate in SC of auto assemblers is very small compared to Thailand. Thailand has nearly 700 tier 1 suppliers, of which 46 % are Thai's domestic companies, and about 1,700 tier 2 and 3 domestic suppliers [14], while those numbers in Vietnam are nearly 150 and 83, respectively (ASEAN Security, 2020). Auto parts being manufactured in Vietnam are mainly labor-intensive and simple-technology components such as glasses, inner tubes, etc.

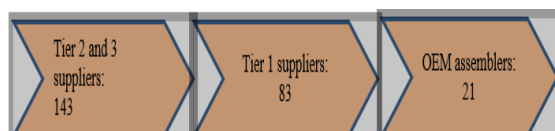


Figure 2. Vietnam automotive supply chain and number of Vietnam's suppliers

In addition, 178 other tier 1 and tier 2 suppliers, which are overseas companies or FIEs located in Vietnam, are involved in SC to maintain the operation of 21 assemblers. It means that Vietnam's automobile industry has to import up to 90 % of auto parts and main raw materials for production of automobile components such as alloy steel, aluminum alloy, plastic beads and hi-tech rubber, etc. This fact explains why the localization rate in Vietnam's automobile industry remains lower compared to regional peers (Figure 1).

The role of small and medium-sized enterprises (SMEs) in SC has been emphasized by [15], explaining that SMEs have better resources and mobility in operation than large companies, and they are responsible for establishing and maintaining links with each other and with other

The weaknesses of VDEs are their limited capacities to meet the needs of MNC manufacturers in Vietnam. In our opinion, this problem is partly expressed through: (1) the localization rate in the final product; (2) the number of suppliers in SC structure; (3) small size, limited capital and backward technology and (4) workforce quality.

A prime example of the current state of the automotive industry is the clearest evidence of the domestic suppliers' capacities.

buyers. But in Vietnam, there is a contrast to SMEs reflected in low working capital and limited access to bank credit because they do not have enough mortgaged assets. According to 2020 Vietnamese Enterprises White Book published by MPI, by the end of 2018 the number of SMEs accounted for 97.2 % of the total and had only 30.4 % of the total capital of all enterprises [16]. Therefore, due to limitation of working capital and credit access, the SMEs ability to implement technological innovation and production expansion is often restricted.

Data from the 2016 VCCI Survey also shows that FIEs bought around 26.6 % of equipment and inputs from VDEs; the rest was imported from the parent company affiliates. The figures prove that VDEs were benefiting very little from the spillover effects such as technology transfer, knowledge dissemination and productivity enhancement brought about by FDI. FDI projects have too few joint ventures, and nearly 80 % of FIEs in Vietnam were the companies with 100 % foreign capital. The proportion of VDEs comprised only about 14 % of the total suppliers providing goods and services to FIEs [17].

Outdated technology is one of the weaknesses of the VDEs. The statistics of the National Department of Science and Technology Information in 2018 exposed VDE backwardness: among surveyed 10,994 manufacturing enterprises, only 879 (8 %) use advanced technologies; 5,501 (50 %) have medium-technology machinery in use; and the rest 4,614 (42 %) were backward technology enterprises ([18]). Most of FIEs, keeping business secrets, have no incentive to technology transfer or share technology secrets and

know-how with domestic suppliers. Besides, looking back on the reality of domestic enterprises, we need to admit that their technology readinesses, capacity to absorb or decode technology are at low level. To some extent, Vietnam's economic growth still depends on cheap labor and capital intensity.

Workers' Vocational Education Level

There are common cases when a VDE wants to become a supplier of goods or a service provider to foreign manufacturers, even if new technologies are used in production. It still has to hire highly

skilled foreign engineers and managers to improve product specifications and service quality. This requirement is not random because the quality of Vietnamese labor force is lower than that of the Southeast Asia region. According to The Global Competitiveness Report 2019, among 141 ranked countries, Vietnam ranked 73 by pillar 6 – skills, in which skills of current workforce ranked 103 and quality of vocational training ranked 102 (Schwab, 2019), while other ASEAN countries as Thailand and Malaysia have better rankings (Table 2).

Table 2. Global Competitiveness Index 4.0 2019. Ranking of Vietnam, Thailand and Malaysia

	Malaysia	Thailand	Vietnam
Global Competitiveness Index 4.0 2019 Ranking	27/141	40/141	67/141
6-th pillar Skills	30	73	93
- Skills of current workforce	8	74	103
- Quality of vocational training	12	64	102

Another impressive example is the low percentage of trained workers. According to the data from 2019 Vietnam Labour Market Updated Newsletter of the Ministry of Labour, Invalids and Social Affairs (MOLISA), by the end of 2019, the size of the labor force aged from 15 to 60 years old was 56.12 million people. But in fact, only 12.36 million accounting for 23.7 % of the total have been trained at different levels, of which: higher education level accounted for 11.4 %; secondary (or college) and intermediate vocational education level made 8.6 % and junior vocational education level comprised 3.7 % [19].

Unreliable Relationship between VDEs and FIEs

Currently, the links between FIEs as subsidiaries of MNC and VDEs are relatively limited due to the reasons on both parts. VDEs, connecting with FIEs, encountered the following difficulties: (1) lack of marketing and market research skills and experience in developing customer relations; (2) lack of information on the requirements of MNCs and international standards applied in certain industries; (3) having the problem with access to capital and deal with investment risks at renovating technology for meeting quality standards and enhancing firm's competitiveness.

On the contrary, FIEs have the problems such as: (1) facing difficulties in finding and identifying competitive suppliers capable to meet international standards because of the lack of information on domestic SIs; (2) taking additional investment in retraining employees, upgrading domestic suppliers to required standards if they want to have the advantage of using domestic supply over imports; (3) focusing on technology transfer required under Vietnamese laws and industrial park development that help promote the spillover effect and linkage with domestic suppliers. Addressing these issues

often results in increased investment costs which foreign investors often try to avoid.

As to MNCs, local firm interaction essentially revolves around two concepts, spillovers and linkages. Spillovers refer the impact or effect of an interaction between the MNC and the local firm, and the term "linkages" denotes the organizational modality of the interaction. Spillovers from FDI are essentially positive externalities from the presence of MNCs on the local economy [20-24]. The impact of FDI focuses on the direct effects of MNCs such as capital supplementation, creating jobs, affecting the balance of payments and speeding up growth rate of developing countries [25].

The nature of the linkage between a foreign investor and a local enterprise obviously has implications for the scope and content of spillover effects on the host country firm. Theoretically, a local firm can benefit from spillovers of MNC subsidiaries despite restricting direct interaction with MNCs. Learning and upgrading opportunities for a local firm can be created by mutual cooperation. The linkage between MNCs and local firms becomes deeper and more reciprocal as the absorption capacity and skills of the local industrial base increases in the cooperation process [26]. However, in case of Vietnam, although FIEs generate major employment, revenues and certain value added shares in many sub-sectors but some effects such as technological, organizational and managerial spillovers on local enterprises become rare because MNCs try to keep technology secrets, know-how and maintain superiority over other competitors in the same manufacturing sector for short-term interests.

Underdeveloped Supporting Industries and Industrial Clusters

SIs are understood as a group of industries or enterprises producing and supplying intermediate goods (raw materials, semi-finished products or final products in the form of components, individual devices and units, etc.) to other areas of production [27]. The role of SIs as determinant of efficiency increase and competitiveness of industrial production where the country's economic growth depends on FDI inflow was emphasised by [28]. In [29] also stated that SIs need to be promoted and developed early because they act as an "infrastructure" for assembly industries.

SI development has crucial effect on balancing manufacturer-supplier relationship, and contributes to improving productivity, labor skills, increasing profitability and competitiveness for Vietnam's products. However, in fact, SI development has not received adequate attention expressed in worrying figures. The 2018 MOIT's statistics showed that the share of enterprises operating in SI was only 4.5 % of the total number of enterprises of the processing and manufacturing industries, attracting more than 600,000 employees, which accounted for 8 % of total labor of these sectors; net revenue of SI production and business comprised around 11% of total revenue of the processing and manufacturing industries [30].

Generally, Vietnam's SIs currently have not enough technological capacity to provide intermediate goods to buyers-manufacturers due to their immaturity. An ILO study of the electronics industry critically commented that the number of VDEs participating in SC of this sector only accounted for 10 % of the total suppliers [31]. The participation of Vietnamese SIs in the SCs of foreign manufacturers is assessed to be limited. Data from the VCCI showed that among 151,000 enterprises working under industrial and construction sectors only 1,400 Vietnamese companies, mostly SMEs, are engaged in the SIs,

of which 20 % can meet the criteria for participating in the GSCs, and 36 % can enter export-oriented production. The output of Vietnam's SIs only meets 25-30 % of overall demand for the industrial sector [32] which is much lower than the goals set in the National Supporting Industries Development Program for the period of 2016-2025 (SIs would meet about 45 % of the demand for domestic production by 2020 and up to 65 % by 2025).

There is weak cooperation between VDEs themselves, especially those operating in the electronics and automotive industry due to their specific products and ownership. To avoid this situation, it is necessary to create industrial clusters (ICs) that have actually been applied in the world for a long time. IC refers to the tight connections that bind certain firms and industries together in various aspects of common behavior, e.g. concentrated in a certain area (Bergman and Feser, 1999). To a certain extent, it allows creating a qualified labor market and contributing to the dissemination of knowledge and working experience. Close links and cooperation between the parties in IC are mutually complementary, ensure effective use of resources, cheapness and timely delivery of the goods or services needed for the business, and enhance competitive advantages of individual companies and a cluster as a whole.

Inequal Treatment of VDEs and FIEs

There has been an unequal treatment for FIEs and VDEs that could be seen in the government policy of attracting foreign investment. Government policies on tax incentives, preferential access to land and capital for FIEs have exacerbated the weak and sparse linkage between VDEs and FIEs. FIEs enjoy more preferential treatment than domestic enterprises, even those with significant export market share have not got such incentives for decades.

Table 3. Summary of tax and land revenue incentives in 2016

	Taxes /Revenues	Total amount of incentives (unit: billion VND)
1	Corporate income tax	46,829
2	Personal income tax	394.9
3	Revenue from water surface and land lease	7,875
4	Revenue from land use	3,802
5	Revenue from non-agricultural land use	676.0
6	Natural resource consumption tax	18.7
7	Excise tax	0.033
8	Import and export duties	4,684.2
	Total	64,279.833

According to the Ministry of Finance (MOF), only in 2016, FIEs have enjoyed tax exemption and reduction of more than VND 35.4 trillion, which is

equivalent to USD 1.6 billion out of a total of VND 64.3 trillion of tax and land revenue incentives, and nearly 92 % of corporate income tax payable and

import tax exemption. Meanwhile, for Vietnam's domestic private enterprises and state-owned

enterprises (SOE) those proportions were 17.8 % and 4.8 %, respectively [33].

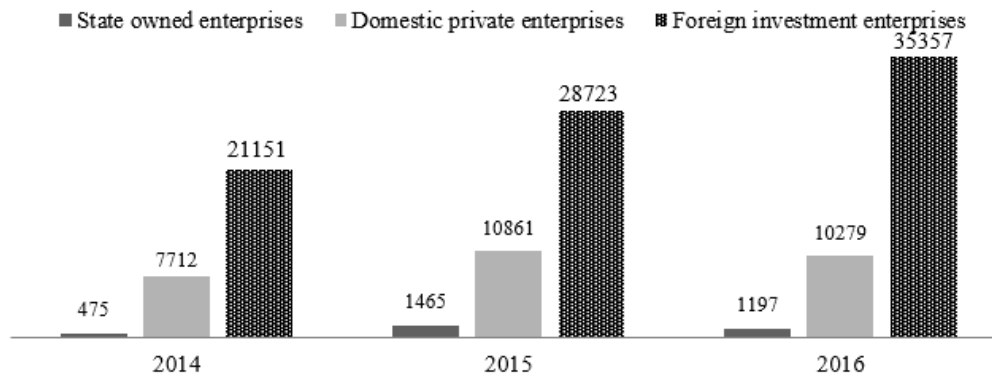


Figure 3. Tax incentives for enterprises of all economic sectors (in VND billion)

This situation is explained by the Vietnamese Government preferential policy that allows businesses on the list of high-tech enterprises to be exempted from corporate income tax for the first four years of operation; during the next nine years they will enjoy 5 %, and seventeen years later this tax rate will be 10 % (in Vietnam, the corporate income tax is 20 %). Most of MNC's manufacturing enterprises located in Vietnam are in the list of high-tech enterprises who are beneficiaries, when very few DEs are in this list.

Impacts of the Covid-19 Pandemic on Vietnam's Enterprises

Today, geopolitical reasons and global upheaval posed challenges and threats seriously disrupting GSCs. Some leading economies, following their own protection policies, hinder globalization and global free trade. Moreover, disasters, for example, the global COVID-19 pandemic, have caused great financial and socio-economic losses in most countries around the world, including the disruption of GSCs.

Vietnam's enterprises still depend on input sources from China. General Department of Vietnam Customs statistics showed that in 2019 the total import value was USD 253.07 billion, but only the import value of seven main commodity groups from China was calculated at USD 56.73 billion, in which imported computers, electronic products and spare parts were worth USD 12.11 billion; machinery, equipment, tools and spare parts – USD 14.9 billion; textile, garments, leather and footwear materials and accessories of all types – USD 11.52 billion; plastic materials and products – USD 3.99 billion; iron and steel of all kinds – USD 3.4 billion; chemical products – USD 3.23 billion; mobile phones and accessories – USD 7.58 billion (Vietnam Customs, 2020).

Outbreak of Covid-19 pandemic has interrupted imports from China and other countries into Vietnam, and many Vietnamese businesses are suffering because of the SC disruption. A recent

survey conducted by International Stem Cell Corporation in late March 2020 showed that 83 % of companies in the physical value chain in Vietnam (retailers, shippers, traders and producers) were suffering from SC break over the past two months; 47 % of them that were largely involved in raw materials faced difficulties with Chinese supplies [34]. In [35] conducted a rapid assessment of the severe impacts of the COVID-19 pandemic with 700 enterprises and Business Associations from 46 provinces/cities across the country, including a large number of enterprises operating in nearly all social and economic sectors. The results were as follows.

- Market narrowing is the main impact of the pandemic on the enterprises; 83.30 % of the enterprises confirmed that they had lost consumption market or had it reduced; the group suffering from the most serious impact includes the domestic private enterprises with 85.17 %;
- Lack of capital/cash flow for doing business: 52.47 % of enterprises stated that they were short of capital or cash flow for doing business due to the impact of the pandemic on production and business activities, and the DPEs were affected most severely (58.61 %);
- Lack of supply of input materials: 45.14 % of enterprises reported that they had a shortage of input materials for production and business activities of enterprises, of which FIEs suffered from the highest shortage (58.33 %);
- Narrowing down the labour force: 43.95 % of enterprises had to shrink the labour force due to the impact of the pandemic, and the private sector had to cut down the largest number of workers (48.56 %).

The interruption of external supplies, though it occurred only in the short term, has serious impacts on production and services in Vietnam, slowing its economic growth, and the consequences will last for a long time if the problem of the SC realignment has not been solved globally.

5. Discussion

Studying the status of VDEs, it can be concluded that the abovementioned weaknesses of domestic suppliers are the barriers that restrict their participation in the SCs and GVC. Moreover, the weaknesses of VDEs even deepen the import dependency level, and inevitably, foreign investors often exploit this situation, applying the transfer pricing system to avoid paying taxes and achieving high profits by raising the price of imported equipment, technology, and raw materials produced by their overseas subsidiaries located in other countries [36].

The 2017 Law No. 04/2017/QH14 on support for SMEs, being the first of its kind, creates a legal framework to mobilize the private sector as well as internal and external organizations and individuals to provide support for SMEs. It also establishes various support measures for SMEs. Under the Law, the forms of support may be a loan provision, credit guarantee, preferential corporate income tax, land rental preferences, technology renewal assistance, training and counseling human resource development. These support measures are financed from the state budget. SMEs may gain easier access to credit and credit guarantee via SME Credit Guarantee Funds set up by provincial-level People's Committees and the SME Development Fund formed by the Prime Minister. But in fact, the access to credit of these Funds faces barriers of cumbersome and difficult regulations that business owner cannot satisfy to get a loan. Therefore, the simplification of procedures and provisions for preferential credit access must be implemented by both the government and the relevant credit institutions. In our opinion, the government policy measures on supporting Vietnam's SMEs and SI development should concentrate on creating a fair business environment and equal treatment for both VDEs and FIEs and reducing the disadvantages of domestic suppliers.

The importance of SIs for strengthening the power of domestic suppliers and balancing the manufacturer-supplier relationship has been confirmed theoretically and practically. In order to develop SI and improve its effectiveness, joint efforts should be focused on measures such as:

- (1) adjusting and updating the list of priority SI products to suit the real needs of the market;
- (2) allocating sufficient funds to effectively implement the National Supporting Industries Development Program for the period of 2016-2025 and building preferential credit packages for development of priority SIs; disseminating information on the SI policies to attract domestic and foreign investment in the SI development;
- (3) building a database of domestic SIs and suppliers to promote the connection between Vietnamese domestic suppliers and MNC manufacturers wishing to find suppliers in Vietnam.

The efforts of both government and local authorities resulted in encouraging a number of industrial parks (named as an industrial zone in Vietnam) and clusters, creating a favorable link between manufacturers and suppliers. As of December 2018, there were 326 industrial zones and clusters set up countrywide, with 249 already in operation [37].

It is important to understand that the quality of the labor force is one of the factors that enhance the competitiveness of the labor market. Low quality of workforce does not meet the needs of advanced production. Hence, the Government should make appropriate measures to attract the public and private educational organizations, research centers, institutes, and enterprises to take part in workforce training and expanding the cooperation in vocational training. On-the-job training needs to be respected and practiced because it is considered as the form of supplementary training in the workplace to improve the workers' skills. As presented above, by the end of 2019 only 23.68 % of the total workforce have been trained at different levels. The imbalance in vocational education as analyzed is shown in the correlation rate: 11.39 % at the higher education level / 8.6 % at the secondary (or college) and intermediate vocational education level / 3.71% at the junior vocational education level. This correlation suggests that the structure of public and private training systems has fallen into serious imbalance. Hence, the education system restructuring should be emphasized in the educational reform process.

In the context of globalization and the rapid development of Industry 4.0, in addition to private investment, public investment should focus on developing IT and telecommunications infrastructure (cloud computing, networking) and data security as well as e-commerce platforms, including intermediaries, e-payments, e-banking, etc. that is having a good start in Vietnam. It would help enterprises, especially SMEs to improve not only the Industry 4.0 readiness and efficiency, but also value chain connections.

Long-term cooperation with local suppliers of a high-tech FIE plays a key role in the production chain. The government needs to adjust manufacturer-supplier cooperation in a way that will support VDEs' development, connecting them as reliable suppliers with leading foreign manufacturers so that VDEs can be able to quickly close the technology gap and to benefit from technology transfer.

In [32] considers that before the COVID-19 pandemic a number of other non-pandemic-related factors have caused global business managers to re-evaluate how to optimize their supplier relationships. These include: (a) rising labor costs in China, Taiwan and other major Asian production centers. This development already has motivated

the relocation of certain product-component manufacturing or sub-assembly into lower-cost nations such as Cambodia, Vietnam and other Asia-Pacific nations; (b) continuing quality control and managing related risk problems of food and pharmaceutical safety; (c) increasing SC complexity and loss of business control; (d) growing resistance of family members to live in highly polluted or politically unstable countries; and (e) re-examining the costs and efficiencies of multi-tiered SC structures. Therefore, reshaping the SC is an essential issue of economic strategy to ensure continuous production.

COVID-19 pandemic has revealed the vulnerabilities of complex GSCs built on the principle of lean manufacturing, accelerated and deepened SC restructuring. Therefore, MNCs are examining different options to reduce the rising risks and costs from complex SCs in a post-pandemic world, including: regionalizing SCs, localizing their suppliers closer to manufacturing operations; hedging strategies aimed at relocating SCs and diversifying raw material sourcing or SC components and redefining the customer-supplier relationship that expands joint opportunities for co-innovation and smarter production, talent recruitment and retention, business continuity when faced with periodic disruptions, and longer-term competitive pricing; building longer-term business relationships with fewer suppliers.

The SC disruption caused by the COVID-19 pandemic has left unpredictable consequences for the social life and production of each country in particular and of the whole world in general. In this case, as raw materials from China get squeezed, Vietnam could look to South Korea and Japan and other countries for inputs. COVID-19 pandemic is a convincing warning for business owners to diversify. Entrepreneurs should have to find a way for reducing dependence on China to protect their SCs. The essence of diversification in this case is to look for different geographical locations to ensure that the supply of raw materials remains intact with contingency plans in place. Each economy needs to assess the occurred situation and the capabilities of its production SCs, creating appropriate policies and measures to strengthen its SCs.

6. Conclusion

Vietnamese economy is facing great challenges, but there are many opportunities for new FDI inflows related to reshaping SCs before and after the pandemic. Since 2019, in order to avoid new tariffs on goods exported from China to the United States and in view of the tendency of protecting national economy that appeared in international relations, more arguments are put to pursue an alternative market for production. Because of unpredictable events and rising labor cost in China, some MNCs have taken steps to expand SC in

Vietnam. The SC disruption caused by the COVID-19 pandemic has accelerated this process. Therefore, along with the post-pandemic recovery of socio-economic activities, Vietnam needs to continue improving the investment environment, developing and upgrading the infrastructure network and having equal policies to attracting domestic and FDI investors, ensuring the power balance of the manufacturer-supplier relationship and equal development opportunities for both FIEs and VDEs.

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