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LINKING FDI AND LOCAL FIRMS FOR GLOBAL VALUE CHAIN UPGRADING: POLICY LESSONS FROM SAMSUNG MOBILE PHONE PRODUCTION IN VIET NAM

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**Linking FDI and local firms for global value chain
upgrading: Policy lessons from Samsung mobile phone
production in Viet Nam**

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Abstract

Countries have sought to integrate into global value chains (GVCs) with the help of foreign direct investment (FDI) by multinationals. While GVC integration leads to productivity spurts, the gains may be one-off and countries do not always achieve more dynamic industrial development in the long term. Samsung's massive investment in mobile phone production in Viet Nam since 2009 has catapulted the country into global electronics manufacturing. The benefits accrued to a sizable local workforce in the form of increased employment and wages but supply linkages—an important channel for technology transfers and spillovers—were limited to lower-tiered suppliers of relatively low value added products. Recent policy efforts to address weak supply linkages have produced some early results. This case study shows that national policy can and must play a role in promoting supply and technology linkages between FDI establishments and local firms, notwithstanding the narrowing policy space and options.

Keywords

Foreign direct investment, global value chains, electronics sector, Samsung, Viet Nam

JEL Codes: F21, F23, O14, O25

1. Introduction

Foreign investors have significantly contributed to Viet Nam's economic development since the launch of economic reforms in the country in the late 1980s. The importance of foreign direct investment (FDI) has increased further since 2007, when the country joined the World Trade Organization (WTO). FDI inflows jumped from USD 2.4 billion in 2006 to nearly USD 7 billion in 2007, and continued to increase to an average of over USD 13 billion per year since 2015. Compared to Viet Nam's peers in the developing world, only the BRICs (Brazil, Russia, India, China) and a few highly developed emerging economies (Singapore, Mexico, Turkey) have managed to capture much higher FDI inflows over the past few years.

The leading foreign investor in Viet Nam is the Republic of Korea's Samsung Group. The company's first investment in Viet Nam was made back in 1996 (production of colour television sets for the domestic market). Samsung's presence in Viet Nam has increased considerably since 2009, when it established a factory complex and began to expand its export-oriented production of mobile telephones outside of China. By late 2017, Samsung had ploughed an estimated USD 14 billion in total investment into the country and provided direct employment to 109,000 Vietnamese at its main production facilities. As a result, Samsung and Viet Nam became increasingly interdependent: Viet Nam accounted for approximately 30 per cent of Samsung's global production of mobile telephones while Samsung alone comprised a staggering 25 per cent of Viet Nam's total merchandise exports in 2017.

Viet Nam's success in attracting large foreign multinational enterprises (MNEs) initially sparked optimism among its leaders about the country's future economic development. It was assumed that FDI would help Viet Nam become "a modern and industrialised nation by 2020", a national goal first adopted at the 11th National Congress of the Communist Party of Viet Nam (Government of Vietnam, 2011). This was premised upon expectations that FDI contributes not only to employment, household income, tax payments and infrastructure, but also develops local industrial capacity through diffusion and leakages of modern technologies from foreign MNEs to local firms. Over time, Samsung's expansion in Viet Nam raised concerns about the potential developmental impact of FDI. Vertical spillovers through supply linkages were negligible due to weak presence of local firms within Samsung's supply chains. Only four local first-tier suppliers were present in the company's value chain in 2014, while the remaining first-tier suppliers located in Viet Nam were all foreign-owned firms (primarily South Korean and Japanese companies were already supplying Samsung's facilities in China and elsewhere).

The lack of formal linkages to local firms, which limits the scope of potential technology or productivity spillovers, raised questions about Viet Nam's FDI policies within the policy circle. The previous decision to grant generous FDI incentives, including tax holidays and reduced land rents, to foreign investors such as Samsung rested on the arguments that the market alone—with no intervention—would produce too little FDI, and that the costs of interventions were lower than the socioeconomic benefits they would bring in the form of employment and spillovers. In fact, Samsung's tax liabilities in 2014 were limited because of tax holidays and other incentives granted in connection with the investments for its first mobile phone production facility in 2009.

This article explores the reasons behind the low participation of Vietnamese firms in Samsung's value chain, and highlights the various policies introduced by the Vietnamese authorities to improve the participation and position of local firms in the value chain. In this context, it is appropriate to emphasize the limited policy space available for emerging market authorities. For example, WTO regulations prohibit local content requirements and subsidies for the use of local inputs, and rules from bilateral investment agreements often limit the scope of policy instruments related to ownership, employment and technology transfer. This analysis is based on secondary sources as well as primary research in the form of interviews with 35 firm and non-firm actors related to Samsung's mobile phone production in Viet Nam, which were carried out in October-November 2017.

The next section provides a brief summary of the findings from extant literature on spillovers and value chain upgrading in emerging markets, including insights about best practice policy options. Section 3 discusses the data and methods, and Section 4 provides contextual information on the Vietnamese electronics industry and Samsung's entry and expansion in Viet Nam. Section 5 focuses on the interplay between the policies of Vietnamese authorities and Samsung's responses and actions. As a brief preview, Samsung announced in late 2017 that the number of Vietnamese first-tier suppliers had increased to 25, with an additional 190 local firms involved as second-tier suppliers. Section 6 summarizes the insights that can be gleaned from this particular case of GVC integration and upgrading.

2. What we know from the extant literature

Global value chains (GVCs) are coordinated cross-border networks of firms and facilities involved in the design, production and distribution of goods and services. As production becomes fragmented across multiple actors and locations, countries can in theory target specific activities and tasks along a given value chain, such as assembly or component manufacturing. This is sometimes perceived as an easy and fast alternative to the construction of a more complex network of industries for a domestic manufacturing base (Taglioni & Winkler, 2016). The international dimension of GVCs is important for developing economies seeking to benefit from wider availability of quality inputs and technology and to escape some of the limitations related to small domestic markets. In most cases, the companies that create and coordinate GVCs are large MNEs from developed countries, which have access to advanced technology, wide supplier networks and global distribution networks. By participating in these GVCs, developing economies can typically expect to draw on one or more of these assets. Since the MNEs dominating GVCs are also among the most active global investors, many countries focus on attracting export-oriented FDI as the main vehicle for facilitating quick integration into GVCs.

Although an inflow of export-oriented FDI into the host economy will almost by definition lead to some degree of GVC integration, it does not always result in the desired developmental impact. This is because GVC integration can take different forms, and the outcome ultimately depends on how a country's factors of production – its natural resources, labour, capital and entrepreneurs – enter the relevant value chains. FDI usually requires the establishment of some physical facilities in the foreign MNE's local affiliate, suggesting that the host country is expected as a minimum to contribute land to the MNE's production process. In this sense, the host country will have achieved a very rudimentary form of GVC integration as soon as it receives FDI. The level of GVC integration rises when affiliates start using local labour as well as locally sourced raw materials and intermediate products. Such linkages to the local economy are important. Increased demand for locally produced goods and services (which creates employment and helps local firms achieve economies of scale), the transfer of both technology and knowledge from foreign affiliates to their local suppliers (which raises productivity and wages in local firms), and the formal and informal training of workers and managers at foreign affiliates (which may benefit local firms when workers change jobs) are some examples of benefits generated through FDI and GVC integration.

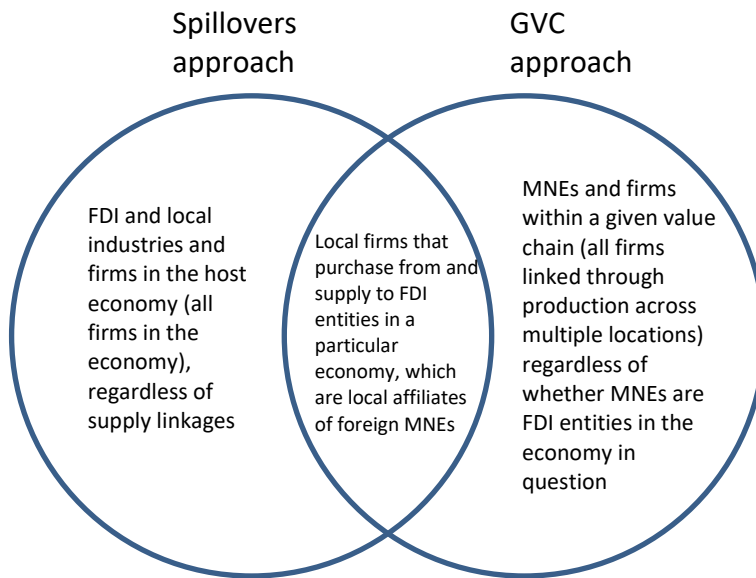
Yet, the local affiliates of foreign MNEs may also end up operating in “enclaves” when foreign MNEs import all or most of their intermediate inputs, or when their global suppliers establish affiliates in the host economy as well, creating foreign production clusters (Giroud, 2003; Gallagher & Zarsky, 2007; Phillips & Henderson, 2009). This results in limited linkages to the host country’s economy and to local firms. An extreme example from the service sector is Chinese construction companies involved in infrastructure development projects in Africa, which in some cases have been reported to almost exclusively use Chinese labour and intermediate products imported from China (Corkin, 2012).

The effects of GVC integration on local firms have been extensively studied in two strands of literature focusing on GVCs and spillovers from FDI, respectively. The two strands of literature differ in their units of analysis.¹ The spillovers approach focuses on the economic relationships between local affiliates of foreign MNEs and domestic firms, while the GVC approach emphasizes the power relationships between foreign MNEs and domestic firms. Notwithstanding their differences, there are overlapping areas in their study objects, illustrated in Figure 1. The two approaches also feature some important basic premises. In both approaches, it is assumed that foreign firms derive their competitive advantages from large endowments of intangible assets such as superior technology, patents, trade secrets, brand names, management techniques and marketing strategies. Such advantages may diffuse unintentionally or be actively transferred from MNEs to local firms, thereby raising the latter’s productivity through different mechanisms. The two strands of literature agree that when local affiliates of foreign MNEs form backward supply linkages, i.e. buy parts, components, materials and services from local suppliers, the assistance, demand and demonstration effects on local firms can be significant.²

¹ The unit of analysis for the spillovers literature is the national economy and its industries. It is interested in the effects of FDI presence on industries, horizontally (the industry of FDI entities) and vertically (upstream and downstream industries relative to FDI entities). The treatment of industries includes enterprises that are linked to FDI firms via supply linkages as well as enterprises that are not. The unit of analysis for the GVC literature is the value chain for a particular product, which is a network of firms linked to MNEs through supply linkages. The MNEs in question need not be FDI entities in the local firms’ home economy.

² The literature also notes the possibility for FDI to result in forward supply linkages, which improve local firms’ access to better and cheaper intermediate inputs through so-called availability and quality effects. When sourcing from local MNE affiliates, local firms may receive after-sales training and assistance on the effective use of inputs, which are not easily available when goods are imported from geographically distant foreign locations (Javorcik, 2004: 608).

Figure 1 Overlapping study objects of the spillovers and GVC approaches



Source: Authors

Assistance effects occur when MNEs transfer technological and managerial knowledge and capabilities to local firms to ensure efficiency and quality. MNEs may also facilitate technology acquisition and implementation. Demand effects occur when MNEs' requirements for intermediate products in greater quantities and variety open opportunities for local firms in supplying industries to reap the benefits of scale and scope economies. MNEs' requirements for higher product quality and process standards may also drive local suppliers to upgrade their production management and technology. Demonstration effects take place when local firms observe and copy MNEs' products and technology (reverse engineering is a classic example of this) and imitate the strategies of MNEs (Crespo & Fontoura, 2007).

Studies have shown that assistance and demand effects are associated with the extent and nature of the backward supply linkages between local firms and MNEs (Javorcik, 2004; Giroud, 2007; Havranek & Irsova, 2011). For case studies, see, among others, Batra & Tan (2002) and Jordaan (2011)). These studies broadly suggest that closer, quasi-hierarchical relationships result in more knowledge transfer and stronger learning effects than arm's-length relationships. In addition to higher productivity in the short term, these spillovers may also help local firms upgrade their position in the GVC. Using the knowledge and resources accumulated from supplying MNEs' value chains, local firms acquire the ability to make higher value products (product upgrading) or to use improved production methods (process upgrading). In some cases, they may even be able to move to a task within the value chain that extracts a higher share of the product's overall value (functional upgrading) or enter new, higher value product value chains

altogether (intersectoral upgrading) (Humphrey & Schmitz, 2002). The evidence generally suggests that initial GVC integration facilitated by FDI entry must be accompanied by increasingly strong backward supply linkages between MNEs and local firms for a country to subsequently achieve higher value added or upgrade in GVCs.

Apart from emphasizing the importance of backward supply linkages for GVC upgrading, recent literature has also addressed the question what national governments can do to create such linkages. A first set of questions relates to the determinants of FDI inflows – how to attract FDI in general and how host countries can encourage inward FDI in knowledge-intensive industries or other sectors where linkages and potential benefits for local firms are expected to be particularly valuable. Most studies suggest that demand characteristics such as host country GDP, GDP per capita and GDP growth have a significant positive impact on FDI inflows on the whole; other economic variables related to infrastructure, production conditions, macroeconomic stability, institutions and investment incentives are frequently also found to be important (for surveys, see Blonigen (2005), Faeth (2009), Koepke (2019)). Several contributions point out, however, that few location variables other than those related to market size and GDP growth have robust effects and that the interactions between location variables are insufficiently understood (Chakrabarti, 2001; Blonigen & Piger, 2014; Nielsen, Asmussen, & Weatherall, 2017).³ In particular, it is unclear whether FDI incentives can compensate for weaknesses in economic variables that matter for foreign investors (Blomström & Kokko, 2003; Tavares-Lehmann, Toledano, Johnson, & Sachs, 2016).

Yet, many governments engage in various kinds of policy intervention to attract foreign investors or to increase the quality of incoming FDI. These interventions often target high-technology industries or high value-added and high-skill activities like R&D and advanced business services, which are expected to contribute to knowledge diffusion, industrial upgrading and “good” jobs in the host country (Enderwick, 2005; Nelson, 2005; Monge-González & Tacsir, 2014,). The problem is that investment subsidies, tax preferences, deregulation and other measures associated with foreign investment attraction are unlikely to be effective on their own. Instead, policies aiming to increase the quality of FDI need to be linked to domestic industrial and innovation policies that strengthen the host economy’s absorptive capacity (Mudambi & Mudambi, 2005; Guimón, 2009; Kemeny, 2010), facilitate the development of knowledge-intensive linkages between foreign investors and local actors (Du & Williams, 2017; Guimón,

³ One likely reason is the heterogeneity of FDI, which is related to different investment motives – including market-seeking, efficiency-seeking, resource-seeking and strategic asset-seeking FDI (Dunning & Lundan, 2008; Meyer, 2015), and which are rarely controlled for. In addition, Faeth (2009) argues that the divergent results are ultimately related to the existence of several different theoretical explanations for FDI.

Chaminade, Maggi & Salazar-Elena, 2018), and embed the foreign investor in the local innovation system with linkages and access to public goods in areas such as education and science and technology infrastructure (Guimón & Filippov, 2012). The appropriate policy mix will differ between countries depending on the host country's development strategies, competitive advantages and other economic circumstances. As an illustration, Guimón et al. (2018) provide a description of both the national innovation system and the fiscal and financial incentives developed by Chile to attract foreign R&D activities, and argue that there is some evidence that these policies have had positive effects.⁴

Apart from attracting quality FDI, policy may also be aimed at influencing the behaviour of already existing foreign subsidiaries. The operations of foreign subsidiaries are not static but adjust continuously in response to changes in production costs, competition, demand conditions and the relevant policy environment (Narula & Dunning, 2010). Appropriate policy interventions may, for example, encourage firms to engage in higher value-added activities and build stronger linkages to local firms.

Some decades ago, the policy mix aiming to influence the behaviour of foreign subsidiaries might have included local content and technology transfer requirements, as well as other rules and regulations directly affecting the production decisions of foreign investors. One of the new challenges in this area is the profound change over the past decades in the context of industrial policy or, more generally, government intervention aiming to shift the structure of economic activity towards sectors, technologies or tasks believed to offer better prospects for economic growth (Warwick, 2013; Pack and Saggi 2006). Governments' room for manoeuvre is constrained by WTO rules which not only circumscribe trade measures such as trade barriers, export subsidies and quantitative restrictions, but also by instruments to regulate the behaviour of FDI (Table 1). Moreover, the policy space is limited by various conditions attached to bilateral and multilateral aid and loan agreements as well as international (bilateral and multilateral) investment agreements (Thrasher & Gallagher, 2008). Regional integration agreements may add further restrictions on national policy space: for example, much of the EU's FDI policy is carried out by the EU Commission on behalf of member states (Shan & Zhang, 2014; Chaisse, 2015).

⁴ Examining the effects of investment promotion in a broad sample of countries, Harding & Javorcik (2011) find positive effects on FDI inflows to sectors targeted by investment promotion agencies in developing economies, but not in industrialized countries. Similarly, Lim (2008) concludes that increases in the amount of resources allotted to investment promotion result in higher investment inflows. To the best of our knowledge, there are no comprehensive studies that focus specifically on the effectiveness of policies targeting quality FDI.

Table 1 List of restricted policy measures

<i>Category</i>	<i>Restricted Policy Measures</i>
Prohibited by WTO Agreement on Trade-Related Investment Measures (TRIMs)	<ul style="list-style-type: none"> ● Local content requirements ● Trade-balancing requirements ● Foreign exchange restrictions ● Inflows attributable to an enterprise ● Export controls
Prohibited by WTO General Agreement on Trade in Services (GATS) *	<ul style="list-style-type: none"> ● Measures discriminating against foreign service suppliers ● Measures restricting market access
Prohibited by WTO Agreement on Subsidies and Countervailing Measures (SCM)	<ul style="list-style-type: none"> ● Administration of subsidies based on the use of local goods or export performance ● Subsidies that have an “adverse effect” on other WTO members
Prohibited, conditioned or discouraged by International Investment Agreements (IIAs)	<ul style="list-style-type: none"> ● Requirements to establish a joint venture with domestic participation ● Requirements for a minimum level of domestic equity participation ● Requirements to locate headquarters for a specific region ● Employment requirements ● Export requirements ● Restrictions on sales of goods or services in the territory where they are produced or provided ● Requirements to supply goods produced or services provided to a specific region exclusively from a given territory ● Requirements to act as the sole supplier of goods produced or services provided ● Requirements to transfer technology, production processes or other proprietary knowledge ● Research and development requirements

Source: Adapted from Johnson (2016) and UNCTAD (2003).

* Note: Subject to the number of commitments made by individual countries.

When no explicit rules and regulations mandating higher value-added and stronger linkages are in place, the requirements for technological upgrading of incumbent foreign investors largely reflect those for the attraction of high-quality FDI in the first place, namely higher levels of human capital, improved science and technology infrastructures and increasing technological capabilities in local firms (Heidenreich, 2012). These factors also contribute to stronger absorptive capability and hence to stronger positive effects of FDI.

To obtain a more accurate picture of the policies that generate positive development effects from FDI and GVC participation, Kummritz, Taglioni & Winkler (2017) explore two questions using an extensive cross-country data set including input-output links for 20 industries. First, they examine how GVC participation (as a seller and as a buyer) is linked to domestic value added; second, they test how a set of proxies for national economic policy influences the relationship between GVC participation and value added. The 10 policy areas included in the study are infrastructure, connectivity, investment and trade policy, business climate and institutions, financial and labour markets, education and skills, product standards and innovation, labour standards, social standards and environmental standards. Although their analysis does not spell out how the different policy areas influence the impact of GVC participation on local value added and productivity, the results are consistent. GVC participation has a significant positive effect on local value added, especially for countries acting mainly as sellers. All ten policy areas magnify the positive effect of GVCs on domestic value added – policies that affect the quality and conditions of input and output factors, those targeting investment and trade flows, and policies targeting the business climate and domestic institutions all seemingly help integrate the local industry into GVCs. Kummritz et al. (2017:32) conclude that “strategies for GVC integration must focus not just on border measures, but also on beyond-the-border measures if they are to extract the maximum benefits for the integrating country”.

It should be noted that not even good policy necessarily suffices to guarantee sustainable benefits from GVC integration. In many GVCs, the lead MNEs have consolidated their market positions and created international oligopolies, resulting in a power asymmetry in the relationships between MNEs and national states (and small producers). This, in combination with the narrow space for government policy, has weakened the bargaining position of governments: MNEs can credibly threaten to move their production and investment to alternative locations if they do not receive favourable treatment. Moreover, MNEs attracted to developing economies by low labour costs may move if and when labour costs increase, even if governments provide a good policy environment. While there has been greater recognition that industrial policy has continued to thrive since the 2008 global economic crisis, attention seems to have shifted more towards horizontal measures that focus on the improvement of business environments. The question whether vertical or selective policy still plays any role in factors such as promotion of linkages to FDI in key sectors needs to be urgently addressed.

3. Data and methods

This article is based on primary research in the form of interviews with 35 firm and non-firm actors related to Samsung's production of mobile phones in Viet Nam, as well as analysis of secondary data and materials. Those interviewed were: (i) Samsung Electronics Vietnam; (ii) four foreign firms (100 per cent owned by Republic of Korea's interests); (iii) twelve local firms (100 per cent owned by Vietnamese interests); (iv) twelve central and local government and quasi-government bodies; (v) five industry trade groups; and (vi) one university (Annex 1). The list of interviewees was constructed on the basis of discussions with key informants in government and a list of supplier firms provided by Samsung. The interview subjects were approached through personal referrals from key informants and Samsung.

The criteria for selecting the firms (other than Samsung) were that they were either existing or potential suppliers to Samsung; that they were located in relatively close proximity to Samsung's production facilities; and that their senior management was available for interview in person. The firms are not identified (except Samsung) in line with their request for anonymity. Non-firm interviewees were chosen based on the relevance of the interviewee's knowledge and experience with industry and policy issues pertaining to Viet Nam's electronics industry, and their availability and willingness to be interviewed.

All interviews were conducted between October and November 2017 in five adjoining provinces located in Northern Viet Nam: Bac Ninh, Bac Giang, Hanoi, Hung Yen and Thai Nguyen. The interviews were based on a semi-structured questionnaire that was sent to the interview subjects in advance, supplemented by further discussions during the face-to-face meetings. Our secondary reference sources consisted of industry reports and statistics, government reports and other publications; the sources are identified where applicable.

4. Samsung operations in Viet Nam

Samsung has been present in Viet Nam since 1996. Its first major investment was in the production of colour television sets for the local Vietnamese market. The conglomerate's presence has been boosted by a series of investments through four wholly owned subsidiaries in mobile phone manufacturing and related activities in Viet Nam since 2007 (Table 2). The subsidiaries are Samsung Electronics Vietnam (SEV, which manufactures electronic devices), Samsung Electronics Vietnam Thai Nguyen (SEVT, which produces communication equipment), Samsung Electronics HCMC CE Complex (SEHC, which manufactures consumer electronics products) and Samsung Display Vietnam (SDV, which makes liquid-crystal displays).

Table 2 History of Samsung’s mobile phone manufacturing in Viet Nam

<i>Year</i>	<i>Milestone</i>
2007	Announcement of investment in a new complex for mobile phone manufacturing
2009	USD 670 million SEV complex in Bac Ninh starts operations
2012	Investment in Bac Ninh complex increases to USD 1.5 billion
2013	Construction of new SEVT complex worth USD 3.2 billion in Thai Nguyen
	Investment in Bac Ninh complex increases to USD 2.5 billion
2014	SEVT’s Thai Nguyen complex starts operations
	Announcement of plans to invest an additional USD 3 billion in Thai Nguyen
2015	Viet Nam accounts for half of Samsung’s mobile phone production globally
2017	Samsung accounts for approximately 25% of Viet Nam’s exports

Source: Interview, media reports

By the end of 2017, Samsung had committed a total investment amount of USD 17.3 billion in Viet Nam, of which over USD 14 billion was disbursed, making it the largest foreign investor in the country. Of that total, USD 7.5 billion was invested in the SEV factory complex in Bac Ninh province (Yen Phong Industrial Park) and the SEVT factory complex in Thai Nguyen province (Yen Binh Industrial Park). Some 75 per cent of SEV’s production is exported to over 50 countries and territories worldwide, while nearly all of the production by SEVT is destined for export markets.

Samsung’s investment in Viet Nam reflects the restructuring of the contract manufacturing and final assembly segments of its regional supply chains. The location of Samsung’s value chain activities has been similar to what has been generally observed in the mobile phone and electronics industries. Research and development and design are primarily carried out at Samsung’s headquarters in the Republic of Korea, with access to skilled human capital and key markets.⁵ Development and engineering are distributed between the home country (the Republic of Korea) and locations that house the key component manufacturers’ development teams (the Republic of Korea, Japan, the U.S. and China). Contract manufacturing and final assembly have historically been carried out in low-cost locations.

⁵ In 2016, Samsung set up a research and development centre in Hanoi with an investment value of USD 300 million. The project was touted as a move to expand into higher value added activities in Viet Nam. Observers, however, noted that the R&D project was not for Samsung’s actual production needs but was instead a strategy to seek maximum incentives from the Vietnamese government (Thang, 2016).

Prior to moving to Viet Nam, Samsung mobile phones were manufactured at six production facilities worldwide – two in China, two in Brazil (for Latin American markets), one in India (for Indian and European markets) and one in the Republic of Korea. Global production was concentrated at the company's China facilities. In 2007, Samsung considered different locations for its new facilities both to meet future demand as well as to reduce production concentration in China. Within a remarkably short period of time after it was selected, Viet Nam surpassed China in terms of both production capacity and actual production volume.

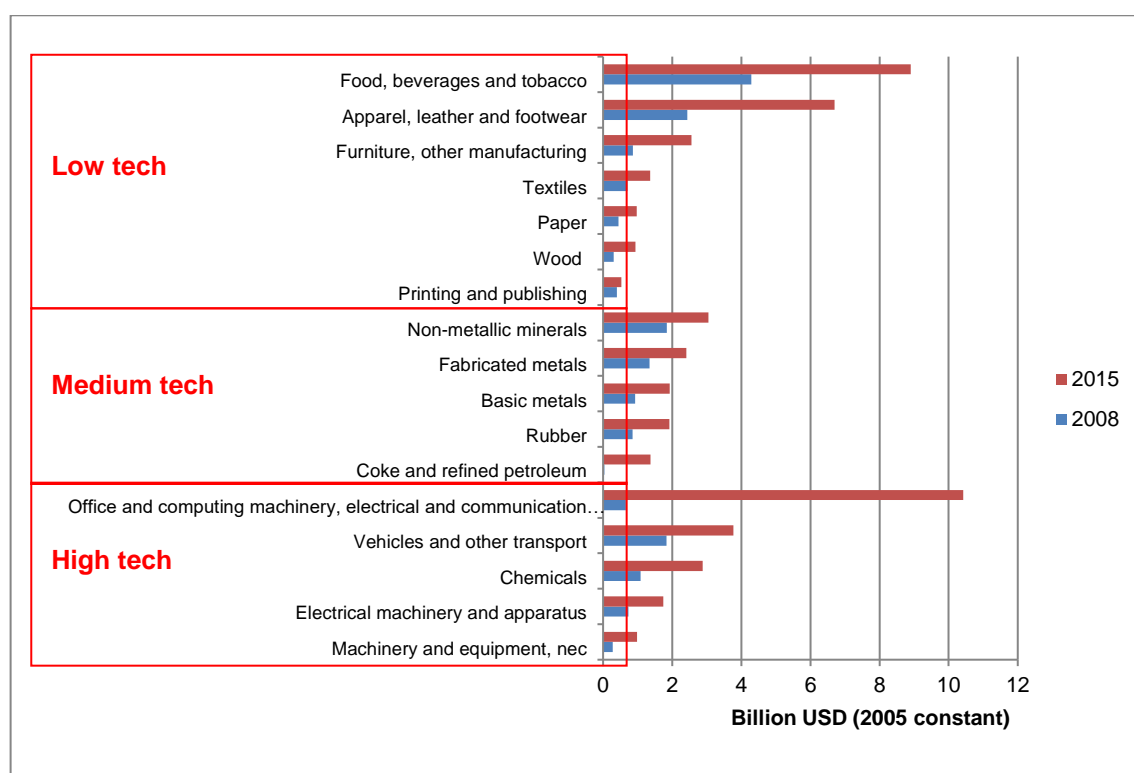
Once SEV and SEVT commenced operations in 2009 and 2014, respectively, Samsung's annual production capacity in Viet Nam grew rapidly to reach 270 million units. By 2015, actual production in Viet Nam accounted for 50 per cent of Samsung's total output of mobile phones. At the same time, Samsung's mobile phone production capacity in China stagnated at 150 million units, with intentions of further reducing it over an unspecified timeframe. The shifting of its key production base from China to Viet Nam was disrupted by a massive manufacturing defect in 2016. Problems with the new Galaxy Note 7 smartphone (assembled in Viet Nam) catching fire due to faulty batteries, resulting in a permanent discontinuation of what was then Samsung's top-end model and a multi-billion dollar global recall, temporarily slowed expansion in Viet Nam.

Samsung's investments in mobile phone production have had a profound impact on Viet Nam's economic structure and export profile. The country's manufacturing value added in 2005 constant prices grew by 175 per cent, from USD 19 billion to USD 52 billion between 2008 (the year before Samsung commenced mobile phone production in Viet Nam) and 2015 (six years after SEV's Bac Ninh facility started operations). The share of high-technology industries in Viet Nam's total manufacturing value added increased from 24 per cent to 38 per cent during this period, almost entirely due to the contribution of the electrical and communication equipment industry (Figure 2). Viet Nam's manufacturing exports in current prices grew by 282 per cent, from USD 51 billion to USD 195 billion between 2008 and 2016. During the same period, the share of high-technology industries in Viet Nam's total manufacturing exports increased from 22 per cent to 54 per cent (Figure 3). Electronics exports (including electrical and communication equipment) alone accounted for 43 per cent or USD 84 billion of total manufacturing exports in 2016 (in comparison with 7 per cent or USD 4 billion in 2008).

Samsung's operations also had a significant impact on employment. As of late 2017, the three Samsung subsidiaries SEV, SEVT and SEHC reported a total of 109,000 employees in Viet Nam, making the conglomerate one of the country's largest employers. The majority of Samsung employees in Viet Nam were categorized as semi-skilled workers based on their

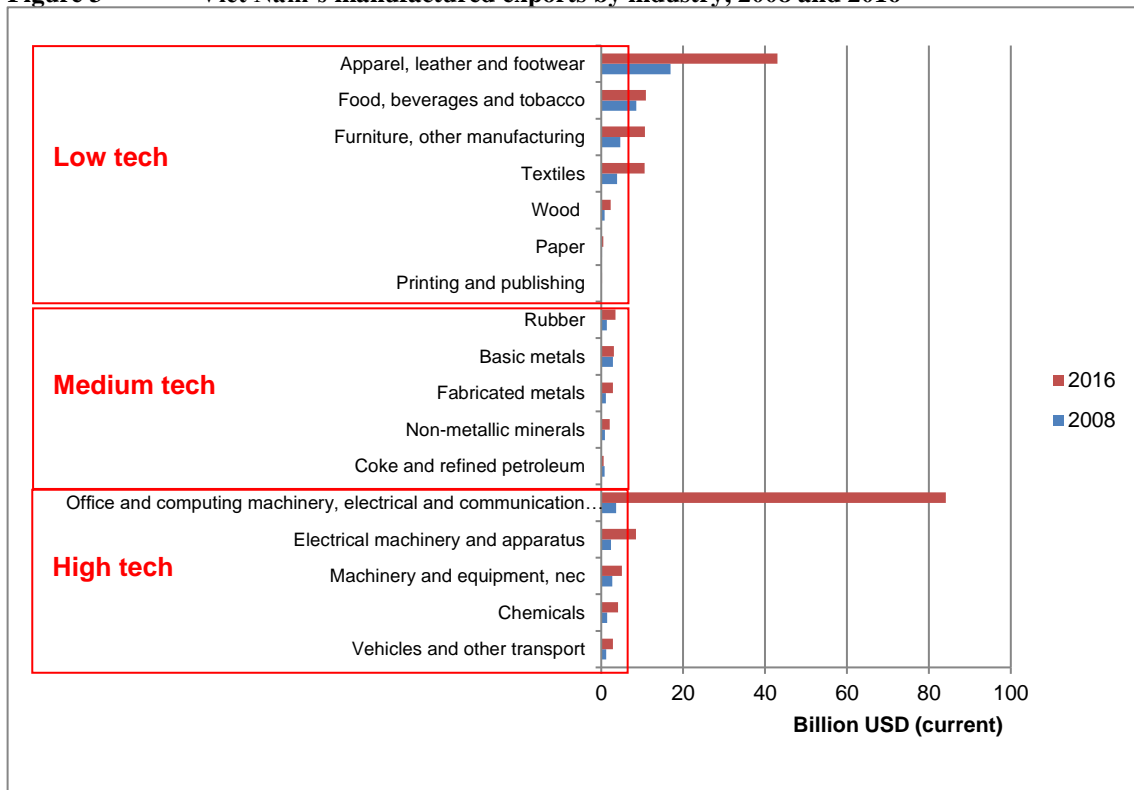
education attainment levels: 89 per cent were high school graduates, 7 per cent had post-secondary or vocational qualifications and 4 per cent had undergraduate degrees and above. An overwhelming 75 per cent of Samsung employees were female. Fourteen of Viet Nam's 54 recognised ethnic groups were represented in Samsung's workforce. About half of Samsung's 500 managerial staff members in Viet Nam (from the ranks of supervisors to heads of department) were Vietnamese. Samsung indicated that it planned to increase the share of Vietnamese managerial staff to 90 per cent of the total.

Figure 2 Viet Nam's manufacturing value added by industry, 2008 and 2015



Source: UNIDO (at ISIC Rev. 3 2-digit level). Data available up to 2015.

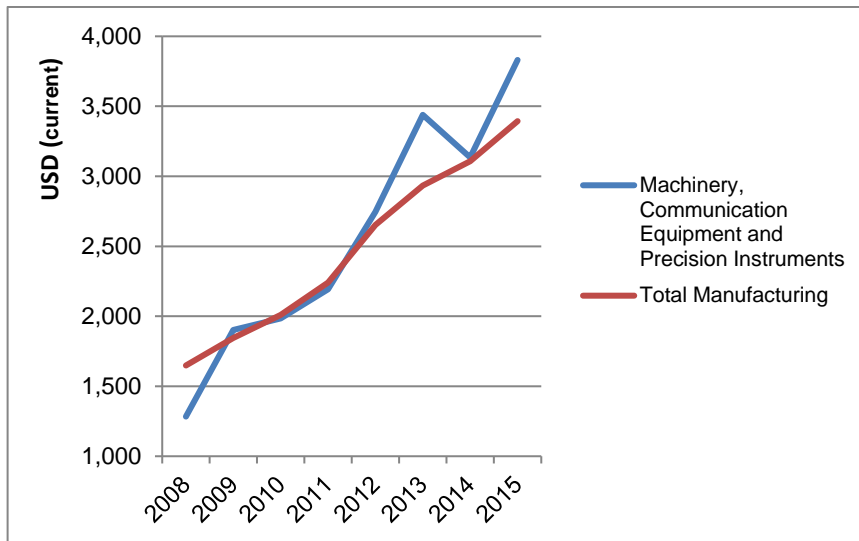
Figure 3 Viet Nam’s manufactured exports by industry, 2008 and 2016



Source: UNIDO, based on BACI-CEPII (at ISIC Rev. 3 2-digit level). Data available up to 2016.

While Samsung did not reveal its wage data for Viet Nam, data at the national industry level suggest that wages increased substantially after the electronics giant’s entry. The average annual wage of an employee in the office machinery, communication equipment and precision instruments industries was USD 1,280 in 2008, which was notably lower than the USD 1,650 recorded for the manufacturing sector as a whole. Wages in all industries have increased over the years, but the office machinery, communication equipment and precision instruments industries have seen faster wage increases than the manufacturing sector in general (Figure 4). In 2015, the average wage of an employee in the office machinery, communication equipment and precision instruments industries reached USD 3,830 (a 200 per cent increase from 2008), well above the USD 3,390 of an average employee in the manufacturing sector on the whole.

Figure 4 Viet Nam's manufacturing wages 2008-2015



Source: UNIDO (at ISIC Rev 3 2-digit level). Data available up to 2015.

Beyond higher wages, Samsung also influenced working conditions in Viet Nam by implementing its internal guidelines on labour conditions, including freely chosen employment; prohibition of child labour; protection of underage workers; work hour management; occupational safety; and food, sanitation and housing. The guidelines were enforced by monitoring Samsung's own working environment as well as that of its suppliers. While no specific data were made available for Viet Nam, Samsung reported that it conducted an undisclosed number of on-site inspections and 290 third-party audits of all critical suppliers globally in 2016, with supplier compliance ranging from 83 per cent to 100 per cent for the labour condition factors evaluated.

In addition to the direct employment effects of the company's own operations in Viet Nam, Samsung has also had an indirect effect on Viet Nam through other foreign investors. This is because Samsung served as a catalyst for further FDI in Viet Nam, with its location decision attracting several of its regional and global suppliers (who were already part of its supply chains elsewhere) to Viet Nam to supply parts to Samsung's operations. Such patterns fit the behaviour of MNEs, which either rely on imported inputs from established suppliers abroad for their production plants or use a co-location strategy that requires established foreign input suppliers to follow them in investing abroad. Co-location reduces the costs and complexity of import sourcing. Both import sourcing and co-location render the entrance of domestic suppliers more difficult, but it at least boosts investment and local employment (Paus & Gallagher, 2008). There are no data on aggregate employment in Samsung's FDI cluster, but one indication of the resulting indirect employment effects is the fact that the total number of employees in Viet

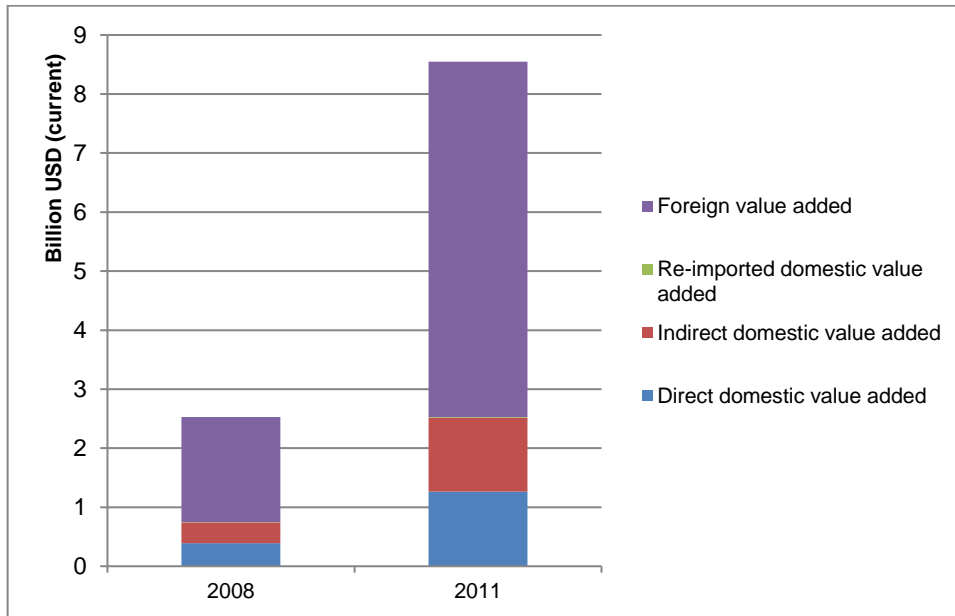
Nam's manufacturing sector rose by 55 per cent over the 2008-2015 period, reaching over 6 million workers. The office machinery, communication equipment and precision instruments industries accounted for 8 per cent of the manufacturing workforce by the end of 2015, compared to 3 per cent in 2008.

Despite Samsung's strong impact on Vietnamese employment and exports, its effect fell short of expectations in other areas. Specifically, the growth of local value added and the integration of local enterprises into Samsung's supply chain have been slow. Disaggregating Viet Nam's gross exports of computers, electronics and optical equipment into value added content by national origin, data from the OECD's Trade in Value Added (TiVA) showed that the Vietnamese share of value added remained low during the first years following the establishment of SEV, despite rapidly increasing production and exports.

Foreign value added, i.e. the value of imported intermediate goods and services, accounted for 70 per cent of the export values of computers, electronics and optical equipment in 2008 as well as in 2011 (Figure 5). Although the value added generated in the country's electronics industry has increased in absolute terms, a continuously large share of the value added accruing to foreign economies is problematic from the Vietnamese perspective. Vietnamese government officials estimated in 2017 that the value of goods and services procured locally by Samsung as a proportion of the value of goods produced by Samsung in Viet Nam was around 30 per cent. Samsung's own estimate of local content in 2017 was 40 per cent.⁶ In 2017, Samsung employed only five Vietnamese tier-1 suppliers of parts and components: all five were producing relatively low value-added packaging materials (in principle, cardboard boxes) for Samsung's mobile phones. Although these firms benefitted from increased sales volumes as well as possibly some knowledge spillovers from Samsung, the overall impact on the domestic industry was limited.

⁶ In 2017, Samsung also reported a "localization ratio" of 57 per cent, but this measure represented the percentage of value added generated from its own production in Viet Nam that was retained locally (including reinvested profits). It should be noted that comparisons over time are difficult because of data limitations and differences in how indicators are defined. For example, it is possible that all three measures noted here—30 per cent of value added procured locally, a local content ratio of 40 per cent and a "localization ratio" of 57 per cent—are all true simultaneously.

Figure 5 Origin of the value added content of Viet Nam’s computer, electronic and optical equipment exports, 2008 and 2011



Source: OECD-WTO TiVA.

Furthermore, the bulk of the so-called “domestic” value added was derived from direct domestic value added generated by the exporters, and indirect domestic value added supplied by upstream industries in Viet Nam. The bulk of this “domestic” value added was very likely accrued by local affiliates of foreign MNEs such as Samsung and the global suppliers that had followed Samsung to Viet Nam – the value added from their production in Viet Nam was only considered domestic because their local affiliates were resident units from the national accounts’ perspective.

The lack of backward supply linkages (“local sourcing”) in Samsung’s mobile phone production offers a useful glimpse at the micro level to understand some of the challenges related to Viet Nam’s participation in GVCs. Attracting MNEs in high-tech industries does not suffice to generate the positive spillovers and demand multipliers necessary to create sustainable industrial development. Without strong supply linkages, there are few direct contacts between foreign MNEs and local firms, less learning and fewer spillover benefits and weaker prospects for upgrading and development of competitive local firms. The question for Vietnamese authorities as well as for policymakers in other countries aiming to use GVC participation as a shortcut to industrialization, is how to promote stronger backward supply linkages and ensure local firms’ participation in GVCs.

5. The policy challenge: Integrating Vietnamese firms into GVCs

In 2014, *Viet Nam News*, the English language daily newspaper published by the government's news service, reported that Samsung had 67 tier-1 suppliers based in Viet Nam, most of which were local affiliates of foreign firms established to supply intermediate inputs to Samsung as part of a co-location strategy. The foreign firms were predominantly Korean (53), with Japanese at a distant second (7), and one firm each from Malaysia, Singapore and the UK (*Viet Nam News*, 18 December 2014). The report contrasted Samsung's figure of four tier-1 Vietnamese suppliers of paper packaging products (generally considered low-technology in nature compared with parts and components), alongside six other lower-tier Vietnamese suppliers.

It was the first clear sign that low participation by local firms in Samsung's production was beginning to worry some Vietnamese policymakers and government officials, at a time of growing anxiety about overdependence of the economy's exports on a single company. Government officials sought assurance that Samsung was delivering value to the economy because its subsidiaries (SEV and SEVT) had been given the most generous incentives accorded to any FDI project in Viet Nam thus far. The two subsidiaries were given four years of corporate tax exemptions, followed by nine years with tax reductions, which meant that SEV only started paying corporate taxes at reduced rates in 2013 while SEVT was expected to do the same from 2018. When Samsung established an R&D centre in Hanoi, it demanded further incentives (including exemptions from land lease fees and import tariffs on R&D equipment, customs clearance between its manufacturing facilities and the R&D centre, and lower personal income tax for employees at the centre) (Thang et al., 2016).

Prior to this, the main objective of the government's FDI policies was to attract foreign investment in high-technology activities. When it introduced the Law on High Technology in 2008, the government offered high-technology enterprises temporary tax holidays, followed by preferential corporate income tax rates that were as low as 10 per cent (half of the established corporate income tax rate of 20 per cent in 2016). Viet Nam also abolished its dual pricing policy for basic infrastructure, which had previously allowed Vietnamese users to pay lower tariffs for services such as telephone installation, water, telecommunications and freight charges than foreign users. To facilitate investment flows, foreign exchange controls and regulations on transfers of capital and profits were relaxed, and investors were allowed to transfer capital and profits abroad without paying additional taxes after meeting their financial obligations to Viet Nam.

While the establishment of supply linkages between domestic and foreign firms featured in policy discussions, no specific legislation and policy framework was introduced at that time. Government officials report a discernible change after 2015, however, with the introduction of government decrees and national legislation providing policy support for domestic firms in supplying industries.

The turning point was growing pressure from Vietnamese firms, which were subject to growing competition as a result of FDI entry in product as well as in factor markets, but still unable to benefit from the opportunities expected to follow with inflows of FDI. At the same time, it was believed that the economy should have the capacity to supply foreign MNEs. At that point, Viet Nam had an estimated 1,800 local firms in domestic upstream industries manufacturing three main types of intermediate goods: metal components (770 firms), plastic and rubber and components (420) and electrical-electronic components (610) (SIDEV, 2017).

Nonetheless, authorities had no immediate answers on the type of policy leverage they could use to effectively increase local firms' integration into Samsung's value chain. Some measures had already been introduced in previous years—for example, the creation of a directory of Vietnamese firms supplying industries, online platforms to match buyers with potential domestic suppliers, and trade fairs where local firms could approach foreign MNEs—but these were deemed inadequate (albeit useful).

Historically, Viet Nam has pursued a less aggressive local content policy than its neighbours in South East Asia. Since the launch of the *Doi Moi* reforms in the late 1980s, which aimed to combine planning with elements of a market economy akin to China's "market socialism" project, the government regularly updated its framework for FDI attraction. Its efforts gathered pace with Viet Nam's accession to the WTO in 2007 and trade promotion initiatives through a series of subsequent plurilateral and bilateral trade agreements (16 signed and 4 under negotiation).⁷ In some sectors, domestic reforms even expanded market access for foreign firms beyond what was required by Viet Nam's WTO commitments (Eurocham, 2016). A new unified Law on Investment was introduced in 2005 (to replace the Law on Foreign Investment and the Law on Domestic Investment Promotion) streamlining rules and procedures related to investment promotion and facilitation, with explicit guarantees against local content policy and other forms of foreign investor discrimination:

⁷ Plurilateral FTAs signed by Viet Nam were mainly with and through the Association of Southeast Asian Nations (ASEAN), including the ASEAN FTA (1993), ASEAN-China CECA (2005), ASEAN-Korea CECA (2007), ASEAN-Japan CEP (2008), ASEAN-Australia-New Zealand FTA (2010) and ASEAN-India CECA (2010). In parallel to plurilateral agreements, Viet Nam has also actively pursued bilateral FTAs, most notably with the signing of the Korea-Vietnam FTA in 2015.

“The State shall not force investors to perform the following requirements: (a) To give priority to the purchase or use of domestic goods or services; or to purchase or use goods from a domestic producer or services from a domestic service provider; (b) To export goods or services at a fixed percentage; to restrict the quantity, value or type of goods or services which may be exported or of goods which may be produced domestically or services which may be provided domestically; ... (d) To achieve localisation ratios in goods domestically produced; ...” (Law on Investment, 2014)

Given the limited possibilities to use formal regulation and performance requirements to guide Samsung’s behaviour, the government opted for a more informal approach. Over the years, government leaders at both national and local level had been conducting regular high-level meetings with specific key foreign firms. The meetings served as a channel for foreign firms to provide feedback so officials could better facilitate their business and operations. Samsung was one of these key firms, and the Vietnamese had developed a good relationship with the company over time, having gone out their way on several occasions to accommodate Samsung’s business and production needs. For example, when a Samsung factory’s operations were affected by a fire, the provincial government quickly deployed its staff to help Samsung with loading so it did not miss its shipment schedule. The same provincial government also timed the planned shutdowns of its electricity supply facilities in a way that did not disrupt Samsung’s production schedule. In 2016, the higher tariffs introduced by the Vietnamese government on steel imports from China (to protect local producers) raised the prices for specific steel plates that Samsung bought from the Korean steelmaker Posco’s affiliates in China. Samsung appealed to the central government for a tariff revision, which subsequently translated into a waiver for steel plates.

The authorities decided that these regular meetings could be also used to persuade Samsung and other foreign firms to opt for changes in areas deemed important by the government, including expectations for more local sourcing. With behind-the-scene meetings and open media statements as the primary channels—“moral suasion” using appeals and persuasion as opposed to the use of outright policy and threats—the government hoped to achieve its policy objectives without discouraging future inflows of FDI from incumbent investors. In retrospect, it seems that this approach succeeded in nudging foreign investors into playing a somewhat more active role in increasing the participation of local firms in their value chains.

Shortly after a key meeting with local officials in 2014, Samsung announced that it would collaborate with the Vietnamese government in holding an annual workshop, the Samsung Sourcing Fair, to which Vietnamese firms would be invited to showcase their product offerings.

At these events, which have continued since 2014, Samsung has presented its sourcing policy and identified specific components that could be potentially outsourced, held meetings with interested domestic suppliers and provided guidance on the application process and requirements for becoming a Samsung supplier.

In September 2015, Samsung also introduced a new three-month technical consultation programme for existing and potential Vietnamese suppliers. Under the programme, Samsung deployed internal experts from the Republic of Korea to Vietnamese firms to help them improve their manufacturing processes. This typically involved initial technical assessments of the firms, followed by interviews and hands-on collaboration with key personnel on production floors to improve the firms' manufacturing processes in a way that would meet Samsung's product and process standards. As of the end of 2017, Samsung had enrolled 26 firms in the consultation programme.

Productivity at the participating firms improved as a result of the consultation programme. By Samsung's own estimates, productivity improved by 80 per cent while defects were reduced by nearly 50 per cent for the Vietnamese firms. Feedback from participating firms—even those that were already supplying to Samsung—was similarly positive. Several stated that Samsung had not only carefully reviewed their production process but had also provided specific recommendations ranging from ways to create a clean production environment to controls of temperature and humidity in specific processes to remove any detected shortcomings.

By mid-2017, the list of Vietnamese suppliers to Samsung had increased to 215, of which 25 were first-tier suppliers while the other 190 were second-tier suppliers. Of the 25 domestic tier-1 suppliers, 20 were providing services ranging from meal catering, recreational travel, cleaning and sanitation to security. As in the years before, the domestic tier-1 suppliers (with one additional firm compared to 2014) were supplying packaging products, while no local firms produced parts and components for Samsung's final products. At the time, Samsung declared its intention to increase the number of domestic tier-1 suppliers to 50 by 2020. However, the number of domestic tier-2 suppliers—domestic firms supplying to Samsung's foreign-owned tier-1 suppliers in Viet Nam—had increased notably compared with 2014. The majority of local firms interviewed for this study were tier-2 suppliers.

Despite these encouraging results, Samsung insisted that it could not only rely on the efforts of foreign MNEs as a long-term solution for increasing local firms' participation in MNE's value chains. As stated by a senior Samsung executive: "Our technical consultation [for domestic firms in Viet Nam] is an exception. Samsung does not do that for other countries and the

government keeps asking us to do more. But multinationals are here to make profits, we have to compete with many companies out there”.

Samsung pointed to two fundamental issues in relation to the integration of local firms into their GVCs. First and foremost, they highlighted local firms’ weak productive and absorptive capabilities, which is a particularly acute problem in Viet Nam where most of the domestic private enterprises are relatively small and young due to historical reasons. To supply to Samsung, it is not sufficient to possess the technical capability to manufacture specific components and parts. The suppliers must also be able to produce inputs in large quantities and at competitive prices to consistently meet Samsung’s quality standards and to have a short lead time from production to delivery, in line with Samsung’s just-in-time (JIT) management routines. At the inaugural Samsung Sourcing Fair in 2014, Samsung declared that it was prepared to source 91 parts locally for the Samsung Galaxy S4 mobile phone and 53 parts for its various tablet models (including batteries, earphones, USB storage devices and data transmission cables). Over 200 domestic suppliers attending the event expressed their interest in supplying to Samsung, but upon assessment, none of them met Samsung’s standards and requirements.

The second issue was related to Samsung’s global production and sourcing strategy, which is common to many large MNEs. While Samsung generally prefers to have more than one supplier for any single input to reduce supply chain risk, there is a limit to what constitutes an optimal number of vendors: working with too many adds costs to supplier partnership and quality control management (“It’s simply not possible for us to work with 100 vendors for one item”, according to a Samsung executive). This is one reason why Samsung felt that it would be more feasible to increase the number of local tier-2 suppliers producing for the Korean tier-1 suppliers operating in Viet Nam. Four such foreign tier-1 intermediaries interviewed for this article confirmed that they had been encouraged by Samsung to use local suppliers, although without specific targets.

In their subsequent engagement with the government, Samsung and other foreign firms stressed that weak local firm capabilities should be addressed by domestic policy actions, focusing in particular on relevant vocational education programmes and science and technology. Moreover, foreign investors argued that the government should try to attract more FDI into the supplying industries to increase the likelihood of local firms integrating into GVCs as tier-2 suppliers. In November 2015, the government issued its single most important policy to date for domestic firms in the supplying industries, known as the Decree on Development of Supporting Industry (Decree of Government on Development of Supporting Industry 2015). The decree serves as the

overarching framework that regulates policies and incentives in relation to domestic firms in supplying industries. It clearly identified product groups that were entitled to policy incentives and assistance to facilitate research and development, technology application and transfer, human resource development and marketing capabilities of domestic firms (Annex 2). Moreover, it highlighted the importance of linkages, with the stated objective to “promote international cooperation in the supporting industry, especially among nations, territories, entities, multinationals and foreign groups with advanced science and technology, to attract investors and to create bond among organisations and individuals operating in the supporting industry both in Vietnam and overseas”. It also explicitly mentioned the need for a Supporting Industry Development Programme (SIDP) which would, among others, foster firm competence in “supplying products to multinationals as well as domestic and foreign suppliers”.

The SIDP was officially introduced in early 2017, and involved key entities such as the Ministry of Trade and Industry, the Ministry of Finance, the State Bank of Vietnam and the Ministry of Planning and Investment. The programme’s goal is to have supplier firms “serve domestic production and export, participate in global value chains, and connect supporting industry enterprises to become product suppliers for domestic and foreign customers” (Prime Minister’s Decision Approving the Programme on Development of Supporting Industries 2017). Various targets have been set for supporting industries. Specifically, by 2020, domestic firms should account for 35 per cent of domestic demand (by domestic and foreign manufacturers operating in Viet Nam) for metal, plastic, rubber and electrical-electronic parts and components; this share shall increase to 65 per cent by 2025 (Annex 3). Once certified under the programme, domestic suppliers in priority industries (including electronics and other high-technology industries) would be eligible for various forms of subsidies and incentives. One of the key work streams under SIDP specifically mentions the need to target FDI in supplying industries in order to create more backward supply linkages for local firms. The government also established a Supporting Industry Enterprise Development Centre (SIDECE) under the Ministry of Industry and Trade to manage and coordinate policies for supporting industry firms.

The local firms interviewed for this article had reservations about the implementation of the SIDP (none of them had been a recipient of past major government initiatives) but in principle welcomed the new policy initiatives. The firms argued that the SIDP should not only assist local firms in establishing new linkages with MNEs, but should also help local firms with existing linkages in their further upgrading endeavours. The firms reported that while they had experienced initial spurts in technology and scale shortly after establishing indirect supply linkages with Samsung, productivity gains were one-off and not necessarily dynamic and

continuous because technology constraints soon resurfaced. As the product cycle in the electronics industry is becoming shorter, the need for recalibration of technology and production workflows to meet specialized customer needs is increasing, pointing to a need for greater technical assistance and consultancy.

Notwithstanding the shortcomings of specific programmes, the general perception among firms and industry groups interviewed was that Viet Nam's policymaking capabilities had improved. For example, in a further sign of growing recognition among Vietnamese officials that the benefits of indiscriminate use of FDI incentives for the country's industrial development were limited, the Ministry of Planning and Investment revised its investment incentive regime after 2018, as it began to draft a new FDI attraction strategy for 2020-2030. While the full details have not yet been released, government officials hinted that Viet Nam's next-generation FDI strategy would move away from competing for foreign investment-based tax exemptions and low wage levels. Instead, the government would likely emphasize FDI in industries that foreign investors have new technology and expertise in that Viet Nam's firms do not possess. Targeted incentives would more clearly link defined policy objectives with eligibility criteria, including links between domestic firms and foreign investors, the number of skilled jobs and the use of environmentally friendly technology (*Vietnam Investment Review*, 30 March 2019).

6. Insights from the Samsung case

The policy framework to promote linkages between FDI and local firms in Viet Nam is in its nascent stage but it has already yielded some promising results, and the Samsung case provides some useful lessons to inform the general policymaking in other developing countries. The Vietnamese government's experience in dealing with Samsung demonstrates that it is possible to experiment with policies for creating linkages, notwithstanding the constraints to the use of explicit performance requirements defined by the WTO and various bilateral and regional agreements. While their feasibility and implementation details may vary according to national context, several policies can be of use to countries seeking to forge greater linkages to FDI. These are discussed below under the three themes aftercare, investment promotion and supplier development.

6.1 Aftercare with a “moral suasion” emphasis

Aftercare for FDI refers to the range of activities from post-establishment facilitation services (in an administrative and operative sense) to developmental support to retain investment, encourage follow-on investment and achieve greater local economic impact (UNCTAD, 2007). It is driven by the notion of what FDI entities or MNEs need in the present and future, and what

the host economy expects from MNEs operating in its territory. In a more strategic sense, aftercare can be understood as a form of continuous engagement with FDI post-entry to maximize the benefits for both MNEs and the local economy.

Aftercare services broadly come in three forms: administrative services that enable operations (e.g. permits, permissions, visas and tax matters), operational services which support the effective and efficient operations of MNEs (e.g. premises for expansion, export promotion), and strategic services (e.g. linking senior managers and executives of MNEs into high-level policy and consultation networks). Establishing aftercare services will undoubtedly increase the workload of and the need for better coordination among the many stakeholder organisations in the public sector. However, it also offers good opportunities for governments to understand and address the needs and concerns of MNEs. When implemented effectively, goodwill and credibility can be established at high levels within FDI entities, which are a valuable channel for exerting “soft” pressure on MNEs, e.g. to induce their participation in the nurturing of local suppliers to attain international standards.

The business conduct of MNEs is increasingly subject to greater scrutiny on matters ranging from human rights and the environment to supply chain management and corruption. Compliance with local laws and regulations per se does not meet the growing expectations for international business to contribute to the host country’s economic and social progress: one of the ways to fulfil obligations under responsible business conduct is local capacity-building. In fact, an increasing number of MNEs are incorporating the agenda of “socially responsible and environmentally sustainable sourcing” (van Zanten & van Tulder, 2018) into their procurement policy, which can also mean sourcing from local producers in the communities in which they operate to promote greater inclusiveness. This presents some room for governments to help an established FDI entity build and present a business case to the parent firm to contribute more to linkages.

However, some caveats need to be noted. Not all local firms or industries will be able to establish linkages with FDI entities. Local firms and industries that have reached a certain minimum threshold of competence and scale are the more natural candidates. The goal should therefore be to increase backward linkages in a sustainable way instead of pursuing it at all costs, including the establishment of high-cost suppliers with no exit and performance improvement strategy. In many cases, this may initially mean targeting local tier-2 suppliers rather than firms that directly supply to foreign-led MNEs.

6.2 Investment promotion targeting suppliers to FDI entities and combining pre-FDI business matching

When MNEs set up FDI operations abroad and intermediate inputs are not readily available in the host economy, they have the option of relying on import sourcing or inputs provided by foreign suppliers that choose to “co-locate” (to reduce the costs and complexity of import sourcing). Compared to import sourcing, co-location offers greater possibilities for linkages. While host economy governments wish to see more local firms supplying directly to the likes of Samsung, indirect linkages through MNEs’ global supplier firms may well be a more feasible first step in a longer term GVC integration process. This means that FDI attraction efforts should not be limited to the large MNEs at the core of GVCs but should also target large supplier firms in upstream industries across the MNEs’ value chains. Once local firms manage to establish linkages to tier-1 supplier firms, there is potential for learning and spillovers as well as opportunities for other local firms to be brought into the value chains as lower-tier suppliers.

However, linking local firms to tier-1 suppliers can be just as challenging as linking them directly to the leading MNEs. The tier-1 intermediaries still have to follow the stringent quality and process control requirements uniformly applied by the MNEs. Tier-1 suppliers often do not have full control over input sourcing decisions – for example, they may not be allowed to independently switch suppliers without agreement from the MNE buyers. Furthermore, many tier-1 suppliers derive a significant share of their value added from manufacturing functions and follow a more internalized production model than the downstream MNEs (which capture a larger share of their value added from intangible assets and intellectual property rights in marketing, branding and design). This may make tier-1 suppliers less inclined to transfer technology and skills to local firms that could be potential competitors in the future.

Nevertheless, there are two reasons why seeking FDI by tier-1 suppliers still is a good bet for creating linkages. Tier-1 suppliers typically provide inputs in the form of specialized parts, which in turn consist of generic and specialized components. While local firms may not possess the skills to process and produce the specialized parts, a useful entry point for them is to focus on the manufacturing of more generic components (in line with the logic of fragmented production) before proceeding to the production of more complex products (in line with the logic of upgrading). The increase in Vietnamese tier-2 suppliers to Samsung between 2014 and 2017 exemplifies at least the first part of this process. In addition, tier-1 suppliers are usually smaller than the large lead MNEs, and this may strengthen the moral suasion potential and negotiating power of national governments.

Many investment promotion authorities have business matching and networking services in place that seek to bring together domestic suppliers and prospective MNE buyers. These are usually accompanied by supplier database portals that provide lists of local suppliers by product or activity. Such matching and networking services are usually, however, provided after an FDI has been made. One way to make these services more effective is to engage foreign investors early on during the planning of their operations. Making capable domestic firms known to foreign investors before the establishment of their operations may increase the likelihood of successful business matching. In the absence of domestic firms that are capable of immediately supplying to FDI operations, officials will at least gain some information about the input requirements and other business needs of the local affiliates of foreign MNEs. A better understanding of industry needs will help officials prioritize the types of firms for government assistance and support under the relevant policies and programmes. It will also help focus future investment promotion efforts on FDI from industries that are likely to source inputs locally.

6.3 Capacity-building through supplier development programmes

While FDI might create the potential for spillovers and firm upgrading, the specific learning effects from foreign MNEs only become perceptible after local firms have successfully established linkages or close interactions with them. However, local firms must reach a minimum capability threshold before foreign firms will consider them as potential suppliers. As the inaugural Samsung Sourcing Fair demonstrated, the gap between the minimum capability threshold and the existing capabilities of local firms is often very large. It is unlikely that this gap can be closed without some form of public action. Once linkages with FDI have been formed, the first generation of linked local firms may still need government assistance to continuously upgrade to diversify their product range, improve processes and find new market channels and a wider customer base (other than the foreign firms they initially served).

Supplier development programmes will need to address a range of obstacles to the creation of successful linkages, including weak capability to reach certifications and standards, lack of technical know-how and difficulties accessing finance. With the emergence of GVCs, one important development with far-reaching implications is the mix of private and public standards being increasingly used by firms to govern their production networks. Once considered important signalling tools to convey information about capability and quality, generic industry standards like ISO9001 are often treated as basic requirements by foreign firms today and are by no means sufficient to guarantee firm entry into GVCs. Product and process standards imposed by global lead firms and their key suppliers across the value chains have advanced so much that they now often exceed the industry and national standards. The costs for compliance and proof

with certification are significant, not least because different GVCs often impose different standards.

An immediate priority for public action is to help fund the costs for compliance and certification. This is necessary, although inadequate for long-term needs. National standards bodies and government agencies in charge of innovation and technology should collect information about standards used by foreign firms in their procurement procedures and pass it along to domestic firms. Such information is considered private and confidential in nature; governments will have better chances with smaller foreign firms or domestic firms that are linked to foreign firms. In the long run, governments will need a coherent standards policy framework that gradually raises industry- and product-specific standards at the national level to match international public and private standards.

In the short run, the public sector can also help transfer key technologies to local firms through targeted initiatives like Viet Nam's Supporting Industry Development Programme. In the longer run, however, the focus must be on improving the quality of the human capital base through investments in education and training at all levels. In the case of Viet Nam, it has been observed that although literacy and numeracy are high, there is an acute shortage of workers with adequate skills for advanced jobs (Bodewig & Badiani-Magnusson, 2014; GSOV, 2017). This suggests that efforts to strengthen vocational education may be particularly valuable in the medium term, while more advanced skills will be required to conduct research, product development and design in the longer term.

To ensure supplier development programmes meet industry needs, it will be necessary to involve foreign firms or industry associations with a higher degree of foreign firm participation. They can provide valuable information that helps the government determine the types of local suppliers that require support and assistance resources should be directed to them. Financial incentives, usually in terms of tax credits, can be given to encourage foreign investors to work with selected local suppliers in the latter's efforts to gain certification and to meet the necessary standards for component production. The efficacy of such programmes is contingent on transparent, objective and realistic merit-based performance criteria that are clearly defined. Only the most qualified firms should be enrolled, with mandatory periodic reporting of achievements and progress.

Supplier development programmes also require adequate resourcing and political commitment over long time horizons, as the formation of linkages does not evolve immediately. At the same time, there must be awareness among policymakers that incentives under supplier development programmes and other support policies are fundamentally “learning rents” to induce innovation for sustained productivity growth. To compel productivity growth and learning in targeted industries, the right institutions must be in place to manage the rents effectively, under the condition that rents will be withdrawn at the end of a stipulated period (or even earlier if performance is poor) and that non-performers will not succeed in retaining their rents (Khan & Blankenburg, 2006). For a country like Viet Nam, which has relatively limited experience with programmes for enhancing domestic firm participation in GVCs, the government does not necessarily have the full capacities to pragmatically monitor and make judgements on performance and to reallocate the rents. As noted by Khan & Blankenburg (2006), mistakes will be inevitable but state institutions will need to rapidly correct them and strive for optimal rent allocation through trial and error.

7. Conclusion

This article examines Samsung mobile phone production in Viet Nam and government policy measures to promote linkages between FDI and local firms. The findings suggest that considerable policy space still exists despite external constraints in the form of international trade and investment agreements. The exercise of policy options is, however, increasingly shaped by the multi-tier supplier networks which now characterize multiple segments within GVCs. This requires a more integrated policy approach that focuses on strategic FDI attraction (targeting specific FDI with the greatest linkage and spillover potential) to initiatives that continuously upgrade firms for the materialization of linkages. While direct linkages to MNEs are difficult, it is possible for local firms to supply through tier-1 suppliers of MNEs. This requires targeted public action to specifically raise the capability of specific domestic firms with the greatest potential to be suppliers to foreign firms and to lend weight to local firms in continuous engagement with foreign firms post-FDI.

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Newspapers

Viet Nam News

Vietnam Investment Review

Annexes

Annex 1 List of interviewees

<i>Type</i>	<i>No.</i>	<i>Organisation</i>	<i>Main product(s)/ Objective(s)</i>
Lead firm (Korean-owned)	1	Samsung Electronics Vietnam (SEV) Co. Ltd.	Telecommunication equipment, mainly mobile handsets
Tier-1 supplier (Korean-owned)	2	DK UIL Viet Nam Co. Ltd.	Key buttons, metal components (e.g. SIM tray), silicone components
	3	DongSung Vina Co. Ltd.	Optical and protective films (e.g. screen protector, screen cover) for display
	4	Jungjin Electronics Vina Co. Ltd.	Testing, measurement and assembly instruments (e.g. jig)
	5	SI Flex Viet Nam Co. Ltd.	Flexible printed circuit board and assembly
Tier-1 supplier (Vietnamese-owned)	6	Chau Thai Son Vietnam (CTSV) Co. Ltd	Print packaging, product labels
	7	Goldsun Printing & Packing JSC	Print packaging, instruction manual
	8	Viet Hung Packaging Co. Ltd.	Carton boxes
Tier-2 supplier (Vietnamese-owned)	9	An Lap Plastics Co. Ltd.	Precision mould, injection plastics
	10	An Phu Viet Plastics Co. Ltd.	Plastic components (e.g. body frame)
	11	Bac Viet Technology JSC	Precision mould, injection plastics
	12	Eco Vietnam JSC	Pressed steel parts
	13	Thanh Long Elecpro. Corp.	Printed circuit board, transformer
Supplier candidate (Vietnamese-owned)	14	Kim Sen Industrial JSC	Aluminium components and modules for jig
	15	Leka Polishing	Machine tools and materials for metal surface treatment
	16	Precision Mechanics and Technology Transfer (PMTT) JSC	Automated production lines and machines
	17	Viet An JSC	Wire harness and tube

Central and local government and quasi-government bodies	18	Bac Ninh Provincial People's Committee	Executive arm at the provincial level
	19	Central Institute for Economic Management (CIEM), Ministry of Planning and Investment	Research on economic reform policy
	20	Department of Information Technology, Ministry of Information and Communications	Regulation of the IT industry (including electronic hardware)
	21	Enterprise Development Agency, Ministry of Planning and Investment	Promotion of local enterprise development
	22	Foreign Investment Agency (FIA), Ministry of Planning and Investment	Investment promotion and facilitation
	23	General Statistics Office of Vietnam, Ministry of Planning and Investment	Statistical and information services
	24	Management Board of Bac Ninh Industrial Zones	Development and operations of industrial zones in the Bac Ninh province
	25	Management Board of Thai Nguyen Industrial Zones	Development and operations of industrial zones in the Thai Nguyen province
	26	National Centre for Socio-Economic Information and Forecast (NCIF), Ministry of Planning and Investment	Research on domestic and international economic issues
	27	National Technology Innovation Fund, Ministry of Science and Technology	Preferential loans and credit guarantees for research and innovation
	28	Supporting Industry Enterprise Development Centre (SIDECE), Ministry of Industry and Trade	Development of supporting industries
	29	Vietnam Industry Agency (VIA), Ministry of Industry and Trade	Development of manufacturing industries
Industry trade groups	30	European Chamber of Commerce in Vietnam (EuroCham)	Organized European business interests
	31	Vietnam Association of Foreign Investment Enterprises (VAFIE)	Tripartite platform connecting foreign firms, domestic business and government agencies
	32	Vietnam Automation Association (VAA)	Promotion of control engineering and automation technology

	33	Vietnam Chamber of Commerce and Industry (VCCI)	Organized domestic business interests
	34	Vietnam Electronic Industries Association (VEIA)	Organized domestic business interests in electronics sector
University	35	Foreign Trade University (FTU)	Education in economics-related majors

Annex 2 Subsidies and Incentives for Firms in Supplying Industries

<i>Subsidies</i>	<i>Fiscal and Other Incentives</i>
<ul style="list-style-type: none"> • R&D will be funded by the Supporting Industry Development Programme; government support of up to 50% of expenditure for pilot production projects • Construction projects of R&D units are entitled to preferential treatment • Policies on land lease, potential support up to 50% of expenses for R&D equipment procurement • Support of up to 50% of expenditure for developing prototype products • Support of up to 75% of expenditure of technology transfer for material production projects using over 85% domestically sourced raw materials • Partial reimbursement for costs incurred for trademark registration expenses, domestic/foreign exhibition participation and market access 	<ul style="list-style-type: none"> • Tax incentives under the provisions of Law 71/2014/QH13 previously not accessible to supporting industry firms (a corporate income tax rate of 10% for up to 15 years, a 4-year tax exemption and a 9-year 50% tax reduction from the time taxable income is earned) • Exemption from import tax on goods used to manufacture fixed assets and components that are not available domestically • Loans at investment credit interest rate from the State investment credit fund • Short-term local currency loans from credit institutions and branches of foreign banks at interest rates not exceeding the State's interest rate ceiling • Additional incentives for small and medium enterprises in the form of investment credit and exemption from water surface/ land rents

Source: Adapted from Decree No. 111/2015/ND-CP.

Annex 3 Supporting Industry Development Programme 2016-2025

<i>Work Stream</i>	<i>Objective/ Target</i>	<i>Activity</i>	<i>Budget (2016-2020)</i>
SME-MNE linkages, FDI attraction in supplying industries	<ul style="list-style-type: none"> Linking Vietnamese enterprises to domestic and foreign manufacturing and assembly firms Support 1,000 Vietnamese firm participants, and have at least 130 become direct suppliers for manufacturing/ assembly of final products 	<ul style="list-style-type: none"> Development of standards for supplying industry products Technical consultancy/ assistance for enterprises Assessment of enterprise capacity and scale Selection of firms with potential to satisfy international requirements Forums between supplying industry firms and domestic/ foreign MNEs Programmes to attract FDI in supplying industries Exhibitions/ fairs for supplying industry products, support for advertisement and brand registration 	US\$ 5.1 million
Training in business administration and production management	<ul style="list-style-type: none"> Provide 2,000 firms with training in business administration and production management, and have 1,500 achieve international/ GVC requirements 	<ul style="list-style-type: none"> Assessment of enterprise management standards and systems Training manuals and courses 	US\$ 10.3 million
Training in human resource development and management	<ul style="list-style-type: none"> Support 500 firms in human resource training Intensify connections between universities, research institutes, training bodies and enterprises 	<ul style="list-style-type: none"> Study and assessment of human resource needs of enterprises Training programmes for managers and technicians of enterprises Training programmes on policy, technology and trade for government officials 	US\$ 4.5 million

R&D and technology transfer and application in pilot manufacturing projects	<ul style="list-style-type: none"> • Support 1,000 firms in R&D and technology upgrading, with 500 firms receiving technology transfer • assistance for pilot manufacturing projects 	<ul style="list-style-type: none"> • Diffusion of technology processes and technical requirements for supplying industry products • Development of national standards and regulations in line with international standards • Support in technology transfer through copyright licensing, technology acquisition, and use of foreign experts • International cooperation in technology training 	US\$ 27.6 million
Database, website and publications on supplying industries and firms	<ul style="list-style-type: none"> • Compile and disseminate information on supplying industry firms 	<ul style="list-style-type: none"> • Firm survey to build database on supplying industry firms in different industries • Purchase of existing databases • Provision of information on supply and demand of supplying industry products • Annual workshops and publications 	US\$ 3.3 million

Source: Adapted from Decision No. 68/QD-TTg.



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