Value Chain Dynamics and Growth of Local Firms:The Case of Motorcycle Industry in Vietnam

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Value Chain Dynamics and Growth of Local Firms:
The Case of Motorcycle Industry in Vietnam

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Abstract

Vietnam's burgeoning market for motorcycles has attracted global industry leaders, players from developing countries, and local firms. This has led to a dynamic evolution of value chains. This paper presents an explanation of the varieties of the growth patterns experienced by the local suppliers, focusing on the roles of customer and local supplier strategies. Case studies showed that while the role of customers may be important, strategies of suppliers to improve the competitive edge in the production of motorcycle components and to diversify into other products account for important variations of growth trajectories among local suppliers. Findings presented in this paper suggest the need to direct more attention to strategy that local firms use to boost their competitive edge in business.

Keywords: local suppliers, motorcycle industry, value chains, Vietnam
JEL classification: L22, L62, O33

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1. Introduction

Motorcycles are a popular means of transportation in developing Asian countries. Due to rising demand, motorcycle production in many of these countries has grown rapidly in the past few decades (Sato and Ohara eds., 2006). The emerging economy of Vietnam has not been an exception. Despite being a latecomer that only started to industrialize under its transition to a market economy in the mid-1990's, the country emerged as the world's fourth largest market in motorcycles in 2006 (following China, India, and Indonesia)[1]. Domestic production of motorcycles started in the late 1990's with the arrival of major Japanese and Taiwanese motorcycle manufacturers serving the tiny domestic market. However, the massive inflow of low-priced Chinese motorcycles in 2000 and 2001 created a heated competition between foreign motorcycle manufacturers and newly emerging local Vietnamese firms that assembled Chinese components. This then led to boosting consumer demand, rapid expansion of motorcycle production, and investment in new product development for the Vietnamese market (Fujita, 2008).

What does this industrial dynamism mean for the development of local Vietnamese firms including local assemblers (which started out by assembling Chinese components) and local component manufacturers (which largely cater to the demands of the local assemblers but also, to a limited to extent, foreign motorcycle manufacturers)? To date, existing research has largely focused on foreign players that have taken the leading roles in the industry in the recent years (Ueda, 2003; Mishima, 2007). Local Vietnamese assemblers and suppliers have largely been dismissed as non-competitive. However, there are indications that intense competition in the domestic market has led to the consolidation of local assemblers and suppliers (Fujita, 2006, 2007, 2008; Pham Truong Hoang, 2007).

This paper explores growth patterns of local firms in the context of these industrial dynamics, focusing on local suppliers of motorcycle components. It specifically addresses the following question: What patterns of growth can be observed among local suppliers, and how can growth trajectories of local firms be explained? At this stage, analytical emphasis is placed on extracting the critical components of the growth trajectories of local suppliers and highlighting the factors that are likely to affect these trajectories.

The remainder of the paper is organized as follows: Section 2 presents the analytical framework of this paper. Section 3 provides a description of industrial settings at the global level and in Vietnam. Sections 4 and 5 comprise the core of the case study. Section 4 presents analyses of how value chains in the Vietnamese motorcycle industry have been transformed since the end of the 1990's. Section 5 includes an examination of the growth trajectories of six case study suppliers and a discussion of their variations as well as explanatory factors behind them. The concluding section contains a summary of findings and implications along with a discussion of issues for future research.

2. Analytical Framework

The global value chain (GVC) approach (Gereffi, 1999; Schmitz, 2004; Gereffi, Humphrey, and Sturgeon, 2005) is at the core of the analytical framework for this research. This approach been used to make significant strides in gaining insights into the process of

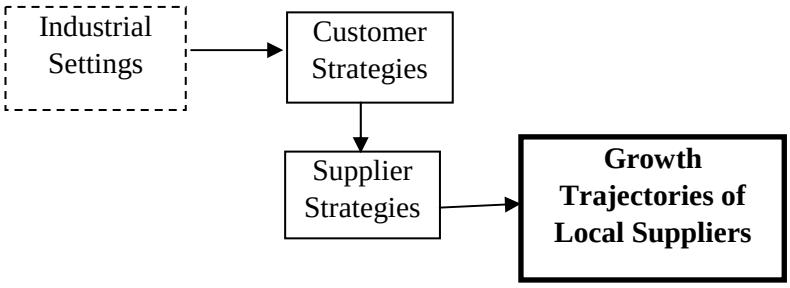
[1] Based on the data from Honda Motor Co., Ltd. (2007).

shifting structures of governance of international trade and industrial production as well as the sequences of value-adding activities that are functionally integrated and coordinated by powerful lead firms from developed countries. Compared to approaches such as the global production network approach (Ernst and Kim, 2002), the GVC approach is unique in that it emphasizes the "power" that certain actors in chains exert over others. The concept of value chain "governance" has been central to the GVC approach because it provides a base for looking at the relationships of producers in developing countries vis-à-vis global lead firms.

The GVC approach is used in this research as the basis for constructing a framework to explain the growth of local firms. In particular, this research builds on the framework presented in a seminal article by Gereffi, Humphrey, and Sturgeon (2005). These authors propose a typology of value chain governance consisting of market-based relationships between firms and vertically integrated firms at the two opposite ends of the spectrum of explicit coordination between firms and three types of intermediate modes of governance in-between. The types of value chain governance are therefore as follows, in the ascending order of the level of explicit coordination: (1) market, (2) modular, (3) relational, (4) captive, and (5) hierarchy. The authors argue that the forms of inter-firm governance are fundamentally shaped by three factors: (1) complexity of information and knowledge transfer required to sustain a particular transaction, (2) the extent to which this information and knowledge can be codified, and (3) the capabilities of actual and potential suppliers in relation to the requirements of the transaction.

Since this research is primarily concerned with the growth of local firms, the dependent variable is growth trajectories of local suppliers. This variable not only captures the absolute level of the growth in a firm at a particular point of time but also growth performance over time and sources of growth, such as specific activities and strategies that bring about growth performance.

Figure 1. Relationships between Variables in this Research



(Source) Prepared by the Author.

Figure 1 shows the relationship between the variables that explain growth trajectories of local suppliers. The key features of this model are: (1) the strategies of customers and strategies of local suppliers are treated as two separate variables; and (2) the impact of customer strategies on the growth trajectories of local suppliers is mediated by the strategies of local suppliers. These are the main differences of the framework adopted in this paper from the previous GVC literature, which has focused on value chain "governance" as the key determinant of the upgrading of a local firm (Schmitz ed., 2004, Schmitz, 2006). Though governance is a useful concept for explaining power constellations

in the value chain, it obscures strategic intents and actions taken by individual players in the chains and the resulting power dynamics. In particular, the concept tends to divert the focus of analysis away from the strategies and actions of suppliers.

The variable "customer strategies" in this paper is similar to value chain governance, which means that "lead firms set and/or enforce terms under which others in the chains operate (Schmitz, 2006: 547)". In value chains governed by Japanese motorcycle manufacturers, motorcycle manufacturers are the lead firms and they determine which of the value-adding functions are to be done in-house and which are to be outsourced to external actors. They also set and enforce the parameters for transactions involving what is to be produced (product definition), how it is to be produced, when it is to be produced, and how much is to be produced[2] (Humphrey and Schmitz, 2001: 21-22). As with "governance", this variable is determined by the industrial settings that shape the requirements of the transactions.

The variable "supplier strategies" so far remains relatively under-investigated in GVC research. Many researchers acknowledge that buyers do not always upgrading by suppliers, and that it requires continuous effort and investment by local suppliers in people, organization, and equipment (Schmitz 2004: 356; 2006: 555). However, these concerns are limited to upgrading *within* value chains serving global lead firms. Viewing the business of local firms in developing countries holistically, they are commonly engaged in a variety of activities. Even those serving global customers often have a diversified customer base including local customers, with whom local firms are likely to develop more symmetrical relationship than with the global customers[3]. This suggests that local suppliers have at least some room to maneuver with their own growth strategies. This paper directs attention to how this important yet largely dismissed factor plays a role in determining the growth trajectories of local suppliers both *within* and *beyond* the value chains serving global lead firms.

The GVC approach is based on an underlying assumption that serving the *global* market is the key to the growth and upgrading of the local firms in developing countries. The industry under investigation largely targets the *domestic* market of developing countries, and this may be seen as incongruent with the GVC approach. However, recent research has shown that the essence of the GVC approach can be used to analyze inter-firm linkages serving domestic markets of developing countries (Bazan and Navas-Aleman, 2004; Navas-Aleman, 2006; Tewari, 1999). Indeed, Sturgeon (forthcoming), relative to the above-mentioned framework of value chain governance (Gereffi, Humphrey and Sturgeon, 2005), has argued that "(r)egional, national and local value chains are nested firmly within global value chains, as we perceive them, and GVC governance theory operates equally well at any and all of these spatial scales"[4].

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[2] The factor of "price" may also be added to the list of parameters set by lead firms (Humphrey and Schmitz, 2001).

[3] This is illustrated by the cases of footwear and furniture producers in Brazil (Bazan and Navas-Aleman, 2004; Navas-Aleman, 2006) and knitwear producers in India (Tewari, 1999). However, these authors did not explicitly examine the role of the strategies of local suppliers in explaining their growth and upgrading trajectories.

[4] While Bazan and Navas-Aleman (2004) and Navas-Aleman (2006) emphasize the role of "national" value chains in promoting the upgrading (especially the functional upgrading) of local firms, whether or not the spatial scale ("national" versus "global") is the key attribute for explaining upgrading by local firms is still controversial.

3. Industrial Settings

3.1 Global Configuration and the Nature of Technology

This paper focuses on an industry that produces low-displacement, business-use motorcycles. Such motorcycles often serve as an important means of transportation in developing countries that are at relatively low stages of development especially pre-motorization phases. The motorcycle industry is thus a typical import-substituting industry in developing countries.

A prominent characteristic of the industry is the leading position of Japanese motorcycle manufacturers combined with the mature nature of the product[5]. The basic technology for this segment of motorcycles was developed in 1958 when Honda launched the highly acclaimed "Supercub" and established an integrated mass production system to produce it. There have been few if any radical product innovations since that time. This model continues to be used as a base model by many firms (Ohara, 2006a: 26-27). The focus of innovation has shifted to incremental process improvements for greater efficiency (Abernathy and Utterback, 1978: 44), and the continuous improvement of "quality, costs, and delivery" (QCD) has become one of the critical factors for sustaining the competitive edge in the industry. By the mid-1980's, Honda (with Yamaha, Suzuki and Kawasaki who had successfully followed suit), expanded operations overseas and captured around 50% of the global market[6]. The leadership of Japanese motorcycle manufacturers was sustained primarily by superior QCD performance in the production process of their own as well as their component suppliers.

This highly concentrated market structure has changed over the past decade with the rise of local indigenous motorcycle manufacturers in China and India. In particular, the newly emerging Chinese motorcycle industry has exhibited organizational features strikingly different from the Japanese motorcycle industry discussed above. Chinese motorcycle manufacturers have achieved strong price-based competitiveness in the production of copies or slightly modified versions of Japanese base models (Ohara 2006a).

3.2 The Case of Vietnam[7]

Vietnam has a short history of motorcycle production. The industry started in the mid-1990's and is characterized by the important role played of FDI and harsh competition between players of diverse nationalities. Table 1 provides a list of major foreign motorcycle assemblers in Vietnam. The three Japanese firms arrived by the late 1990's. However, massive imports of cheap "knocked-down" components from China (usually referred to as "China Shock") during 2000 and 2001[8] gave rise to more than 50 local firms engaged in the assembly of motorcycles using Chinese components. These "Chinese motorcycles" (*xe may Trung Quoc*) are primarily copies or slightly modified versions of Japanese base models. Chinese motorcycles, with what seems to be poor quality, have

[5] This paragraph is based primarily on Otahara (2000) and Ohara (2006b).

[6] This figure includes production in Japan as well as exports of vehicles and knocked-down components from Japan that are assembled overseas (Honda Motor Co., Ltd., 1986: 4).

[7] This section is based on Fujita (2006, 2007, 2008).

[8] Imports were in the form of "knocked-down" kits rather than assembled vehicles because Vietnam had prohibited imports of assembled vehicles since 1998.

prices as low as one-third to one-fourth of Japanese-brand models. They have been able to penetrate medium- and low-income consumer markets in urban and rural areas, markets that had remained unexploited by Japanese and Taiwanese firms. The entry of Chinese motorcycles has led to a remarkable market expansion (Figure 2), where local assemblers of Chinese motorcycles have accounted for a major share in the years 2001 and 2002 (Figure 3).

Table 1. The List of Foreign-Invested Motorcycle Manufacturers in Vietnam

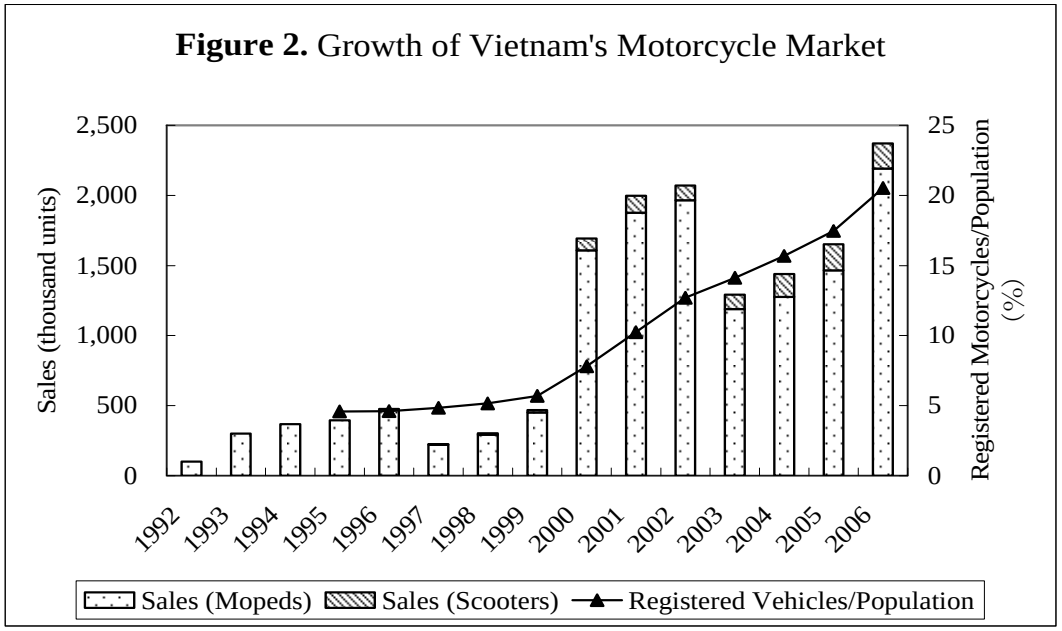
Name of the Company	Year of License	Ownership Structure
Vietnam Manufacture & Export Processing Co., Ltd. (VMEP)	1992	Chinfon Group (Taiwan, 100%)
Vietnam Suzuki Corp.	1995	Suzuki Corp. (Japan, 35%)、Sojitz (Japan, 35%), Vikyno: Southern Agricultural Machinery Corp.(Vietnam, 30%)
Honda Vietnam Co., Ltd.	1996	Honda Motor Co., Ltd. (42%), Asian Honda Motors (Thailand, 28%), Vietnam Engine & Agricultural Machinery Corp. (Vietnam, 30%)
Yamaha Vietnam Co., Ltd.	1998	Yamaha Motors (Japan, 46%)、Hong Leong Industries (Malaysia, 24%), Vietnam Forestry Corporation (30%)
Lifan Motorcycle Manufacturing JV Co.	2002	Chonqing Lifan (China）70%, Vietnam Import-Export Technology Development Co. (30%)

(Source) 1) Survey by the author; 2) Survey conducted by Vietnam Institute of Economics, Vietnam Academy of Social Science as commissioned by the Institute of Developing Economies in 2004.

The penetration of Chinese motorcycles has created heated competition between foreign and local motorcycle manufacturers. In 2002, Honda Vietnam fought back by launching a new model that was priced approximately one-third that of its previous models. Further, the low quality of “Chinese motorcycles” gradually became evident to the local consumers, and the Vietnamese government strengthened the enforcement of import controls and local content rules. As the consequence, sales of local assemblers fell considerably, and foreign assemblers, especially Honda, quickly expanded their sales (Figure 3). Nevertheless, despite the inability to substantially boost their competitive edge in terms of quality or design, local assemblers continued to account for the over one-third of the market by catering to low-income consumers in rural areas.

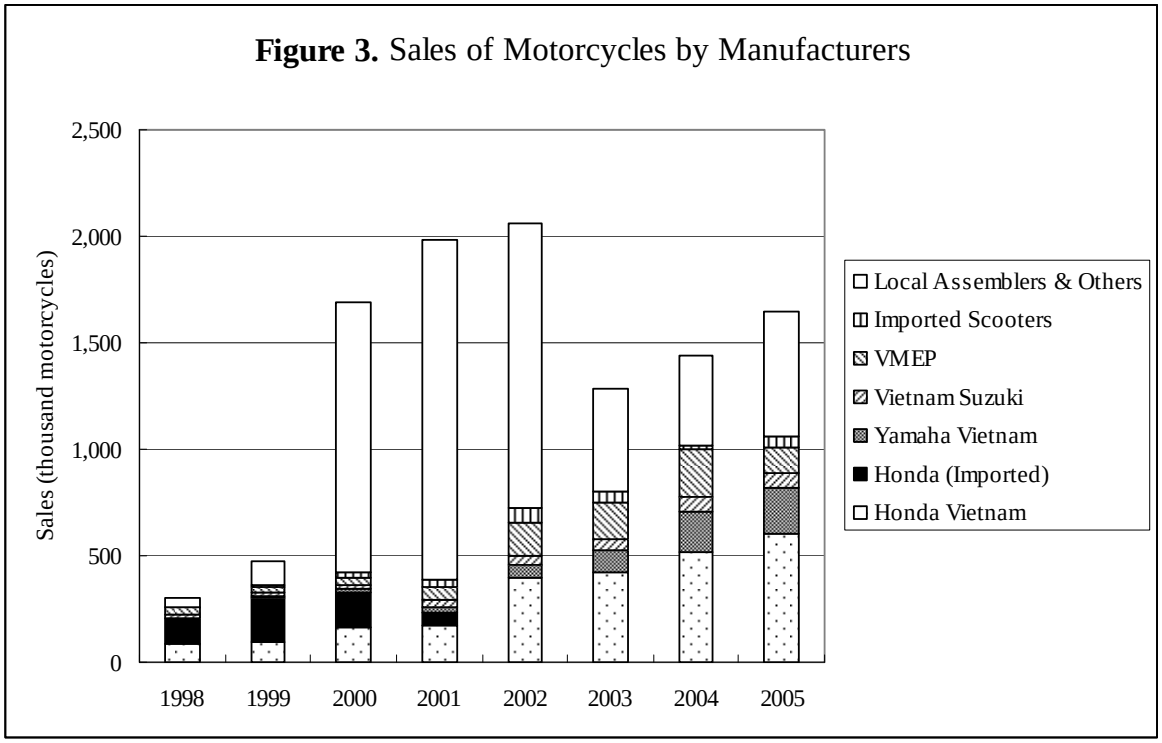
The industry entered a new phase around the year 2005. At this time, the Vietnamese government, in an effort to speed up negotiations for the country’s entry into the World Trade Organization (WTO), abolished a series of regulations that had previously restricted sales of motorcycles and the expansion of production by foreign motorcycle manufacturers. This move significantly boosted domestic sales of motorcycles and stimulated a new wave of FDI in the expansion of motorcycle production and motorcycle component production (Figure 4). This seemed to set the industry on a more market-oriented development path.

Figure 2. Growth of Vietnam's Motorcycle Market



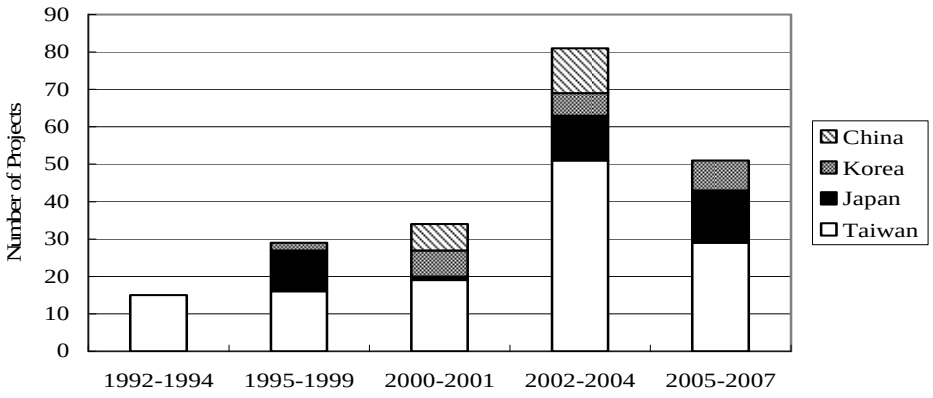
Source: Honda Motor Co., Ltd. *Sekai Nirinsha Gaikyo (World Motorcycle Facts & Figures)*, 2007.

Figure 3. Sales of Motorcycles by Manufacturers



(Source) Bo cong nghiep, "Quy hoach phat trien nganh cong nghiep xe may Viet Nam giai doan 2006-2015, co xet den nam 2020", Vien nghien cuu chinh sach, chien luoc cong nghiep, 2007.

Figure 4. FDI in Production of Motorcycle Components (Number of Projects Licensed)



(Notes) Data for China was available only to October 2004.
(Source) Prepared by the author and based on data from the Ministry of Planning and Investment.

4. Transformation of Value Chains: Customer Strategies and the Positions of Local Suppliers

This section includes discussion of the transformation of value chains in the Vietnamese motorcycle industry since the late 1990s. Focus is placed on the changes in assembler sourcing strategies and the local supplier positions in these value chains. While the industry is characterized by a diversity of nationalities, two sets of value chains that are important and have contrasting governance features are examined: (1) those governed by Japanese motorcycle manufacturers and (2) those led by local assemblers (typically in cooperation with Chinese firms). The former will hereafter be termed "Japanese chains" and represented by value chains governed by Honda Vietnam. The latter will be termed "Vietnamese-Chinese chains" and represented by the value chains governed by three relatively large assemblers (M1, M2, and M3).

Unless otherwise mentioned, information and data are mainly based on a series of interviews conducted by the author with the assemblers and their suppliers in 2001, 2002, 2004, 2005, and 2007.

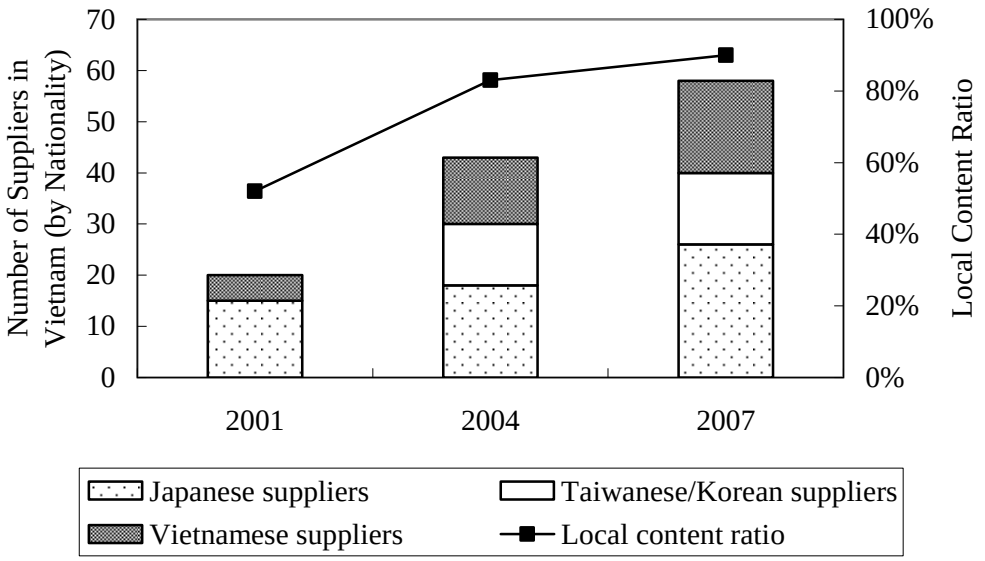
4.1 Japanese Chains: Emergence and Consolidation of Honda's Captive Chains

As discussed in Section 3, the basic strategy of Japanese motorcycle manufacturers for overseas operations was to produce as many components and materials as possible in the country where the company had invested. Their value chains in Vietnam are best described as "captive". Suppliers in Vietnam, regardless of nationality, are assigned a narrow range of activities in manufacturing components since product development and design are conducted in R&D bases in Japan and/or Thailand. Components are customized to each model, so customer-specific investments in dies and molds are required. Once a supplier for a particular component or a particular model is selected, the supplier continues to supply the component throughout the duration of the model. Because supplier performance is crucial for Honda's competitiveness, various

mechanisms of coordination beyond market transactions (including monitoring, controls and assistance schemes) are put in place in order to achieve constant improvements in QCD levels.

The need for local sourcing has become even more pressing with the implementation of local contents rules in the period 2000 to 2001[9], Honda faced particular difficulties in increasing local contents due to the absence of competent local suppliers and the reluctance of Japanese component suppliers to invest in Vietnam. At the end of the 1990s, the local content ratio was only slightly over 50%, and local sourcing was limited mainly to in-house production and to the limited number of Japanese suppliers that had invested in Vietnam. However, during the start-up phase, Honda Vietnam selected a few local companies to be their suppliers. Experts from Japan were sent to the plants of potential suppliers to evaluate their operations. After samples were tested and approved, experts then stayed at the plants for periods ranging from several weeks to several months in order to set up production system[10].

Figure 5. Local Sourcing of Honda Vietnam



(Source) Author's interviews.

An important milestone in the evolution of Honda's sourcing strategy occurred in 2002. At that time, the company launched Wave Alpha, a model strategically developed to compete against Chinese motorcycles. The price of this model was approximately one-third that of the company's previous models. The key factors behind such radical price reduction were squeezing of product development costs by making use of pre-existing components rather than developing them from scratch, as well as reduction in the costs of

[9] This policy sets out import tariffs for components according to levels of the local content ratio. Higher local content ratios mean lower import tariffs. Although the policy was announced at the end of 1998, it was not fully implemented until January 2001 due to strong opposition from Vietnamese assemblers.

[10] This description is based on the author's interviews with local suppliers in 2002 and 2004. Nguyen Duc Tiep (2006: 88) also remarks that Honda Vietnam assisted local suppliers in designing production layout and process, modifying equipment, and establishing problem solving groups.

components. Incumbent suppliers then faced enormous pressure to reduce costs as suppliers were compared on the basis of their QCD levels and prices. When Wave Alpha was launched, 27 types of components, some of which had previously been sourced from Japanese suppliers, were sourced from China through Honda Sundiro Motorcycle Co., Ltd. in China. Further, the local content of Wave Alpha and the number of suppliers in Vietnam increased substantially during the few years after Honda started to produce Wave Alpha (Figure 5).

Honda launched an extensive search for new potential suppliers by dispatching experts from Japan. Many non-Japanese firms (especially Taiwanese and Vietnamese firms) became Honda's suppliers at this stage. It is important to note, however, that the above changes took place only for non-core components. Honda's relationship with the supplier of core components remained largely unchanged: these components continued to be developed in collaboration with its "group" suppliers[11] in Japan and Thailand.

Although this may seem to be a radical change, the development Wave Alpha did not change the basic nature of value chain governance. Instead, it eventually led to an expansion and deepening of captive networks in Vietnam. An increase in local content ratios after the initial launch of Wave Alpha also entailed gradually replacing Chinese components with locally produced components as incumbent suppliers in Vietnam made progress in cost reduction and eventually achieved higher QCD levels than suppliers in China.

The development of Wave Alpha, combined with local content rule, also brought about an increase in the number of second tier suppliers. This important change came about when pressure to substantially reduce production costs led to Japanese and Taiwanese first tier suppliers attempting to replace imported components with locally sourced components. They further sought to replace components sourced from Japanese suppliers with components sourced from Taiwanese or Vietnamese suppliers. The author interviewed six suppliers from Japan, Taiwan, and Korea in 2004 and 2005. They used a total of 162 second tier suppliers, at least 106 of which were Vietnamese firms[12]. The majority of second tier Vietnamese suppliers were small-scale private firms or businesses located near the first tier suppliers. Many had previously expanded production of components for local assemblers and subsequently began to take part in both Vietnamese-Chinese and Japanese chains.

Honda's captive networks experienced further consolidation during the following years 2005 through 2007. During this period, Honda's production scale expanded rapidly from roughly 400,000 units per year in 2002-2003 to approximately 1 million units in 2007[13]. This booming production led to an increase in FDI by Japanese and Taiwanese suppliers (Figure 4), including those that had hesitated to invest in Vietnam in the late 1990's. The larger scale of orders and intensified competition among suppliers tilted bargaining power towards Honda, and this led to further consolidation of captive networks.

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[11] Among Honda's subsidiaries and affiliates (which have Honda's capital participation) in Japan, 48 are producers and distributors of automobile and motorcycle components (http://www.honda.co.jp/group/Manufacturing/, accessed on March 4, 2008). Many of these group companies have established factories abroad to supply components to Honda's overseas subsidiaries.

[12] It is possible that some suppliers were counted more than once.

[13] This is an expected figure as of November 2007 (*Viet Nam News*, November 17, 2007).

4.2 The Vietnamese-Chinese Chains: Evolving Market Relations

Local assemblers organized value chains in ways strikingly different from Japanese assemblers. While there are variations in the strategic orientations of local assemblers (Fujita 2006), this paper specifically focuses on the following three assemblers: (1) assemblers M1 and M2 which expanded sales by pursuing the "low price" strategy, and (2) assembler M3 which pursued a slightly different strategy of "higher price, better quality". Among local assemblers, M1, M2, and M3 ranked first, fourth, and nineteenth, respectively, in terms of the amount of sales in 2006[14].

During the "China Shock", local assemblers were primarily engaged in the assembly of motorcycle component kits imported from China. The sourcing strategies of local assemblers emerged in the period 2002 to 2003 when the government stepped up enforcement of local content rules and introduced regulations for motorcycle assembling firms. These rules required local assemblers to produce certain key components in-house and to achieve a minimum local content ratio of 20%[15].

All three assemblers combined in-house production, domestic sources (Chinese, Taiwanese and Vietnamese suppliers in Vietnam), and imports (mainly China). Despite variations in the combinations across assemblers as well as changes over time, similarities in sourcing patterns could be identified. Unlike Japanese assemblers, local assemblers have been producing copies or slightly modified versions of Japanese base models, and thus components have been mostly general components in the sense that they are not customized to specific models. Their value chains are best characterized as market-based. While the transactions may not necessarily be "on-the-spot" and may extend over months or years, switching of suppliers does take place, predominantly on the basis of price. Since assemblers do not demand strict quality and delivery requirements from suppliers, exchanges of complex information between assemblers and suppliers do not take place.

While above accounts of sourcing strategies of local assemblers still remain valid, the author's field research in 2007 suggests that market-based chains were gradually evolving. Customized components, which are designed for each model that an assembler launches, and general components, which are used in common to different models and different assemblers, must be distinguished. Plastic covers and engine covers determine the external appearance of products. For the three assemblers, these belonged to the category of customized components and were designed for each model to meet rapidly changing consumer preferences. The remaining components belonged to the category of general components. M3 designed and manufactured plastic covers within the firm. M1 and M2 depended on a Chinese supplier in Vietnam for such covers.

Perhaps more importantly, the customer-supplier relationship has partially moved away from "on-the-spot" market-based transactions. In November 2007, the author interviewed a Chinese supplier who supplied plastic covers and frames to 43 local assemblers, including M1 and M2. The interview uncovered the fact that this supplier used market information and requests provided by customers (local assemblers), and market information collected in-house to design approximately four models per year. The

[14] Ranks are based on results of the 2006 enterprise survey conducted by the General Statistical Office of Vietnam.

[15] Regulations included, among others, minimum investments, the minimum local content ratio, and requirements for in-house manufacturing of key components.

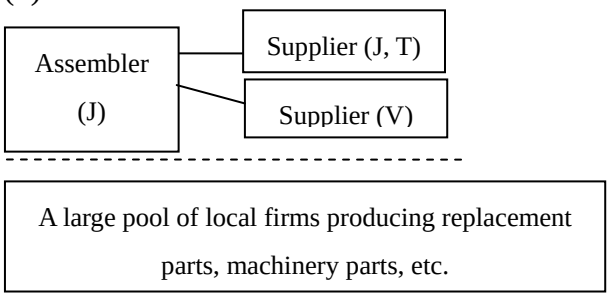
relationship between this Chinese supplier and local assemblers seems to have shifted to one characterized by mutual dependence or "relational" governance. This is because the knowledge of local assemblers about the Vietnamese market and the design and manufacturing capabilities of the Chinese supplier have become critical for each other.

However, this shift to relational governance has been only partial. As for non-customized components, market-based transactions continued to prevail. Further, the entry of an increasing number of Vietnamese, Taiwanese, and Chinese firms into production of motorcycle components and the abandonment of local content rules by the Vietnamese government have made it easier for local assemblers to switch suppliers on the basis of price. By 2005 even M3, which had primarily relied on Taiwanese and local suppliers, increasingly turned to Chinese suppliers in Vietnam and direct imports from China[16].

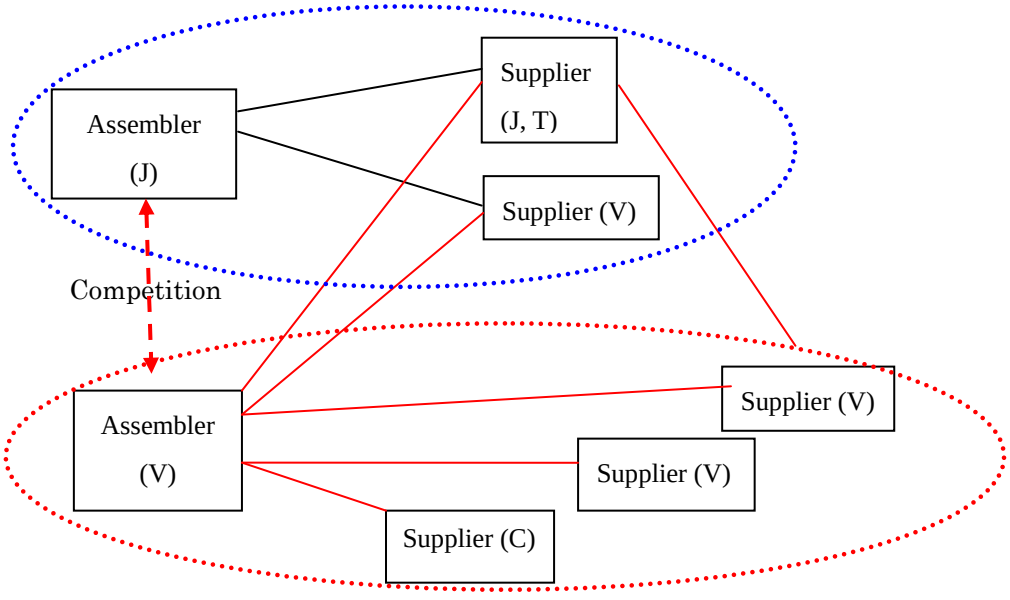
4.3 Summary: Transformation of the Value Chains

Figure 6. Transformation of Value Chains

(1) The late 1990s



(2) After 2000



(Notes) J=Japanese; T=Taiwanese, C=Chinese; V=Vietnamese
(Source) Prepared by the author.

[16] This development is also due to the increase in FDI by Chinese component manufacturers (Figure 4) and the reduction of tariff rates for motorcycle components.

Analysis in this section has shown how the different nature of products and requirements of transactions led Japanese motorcycle manufacturers and local Vietnamese assemblers to adopt different sourcing strategies. It has also revealed how competition between these two groups of motorcycle manufacturers has brought about adjustments and adaptations to their sourcing strategies. These changes in sourcing strategies created new opportunities for Vietnamese firms to enter into the production of motorcycle components.

Figure 6 provides a summary of the transformation of value chains as well as changes in positions of local suppliers. The most remarkable changes are two-fold: (1) increased numbers and layers of suppliers which suggests consolidation and deepening of both Japanese and Vietnamese-Chinese value chains, and (2) emergence of overlap between Japanese and Vietnamese-Chinese chains: this indicates that some suppliers have started supplying to both Japanese and local assemblers.

5. Growth Patterns of Local Suppliers and Their Determinants

Steady growth of local component suppliers came with industrial development and dynamic transformation of value chains discussed in the previous sections. This section focuses on local suppliers and the factors underlying their growth patterns.

5.1 Cases

Although comprehensive time-series data on local component suppliers are not available, the author's field research in 2004 and 2005 revealed that a number of important changes were taking place among local component suppliers. First, from 2000, many local firms started supplying components to local assemblers. Second, the number of first and second tier suppliers of Japanese assemblers also increased during the same period (Fujita 2006, 2007).

The growth patterns of six local suppliers from three different categories were examined according to the types of value chains suppliers participated in and their positions in the value chains: (1) first tier suppliers of Japanese assemblers (Group A), (2) second tier suppliers of Japanese assemblers (Group B), and (3) suppliers to local assemblers (Group C). Profiles of suppliers are shown in Table 2. Unless otherwise stated, data and information are based either on the author's interviews conducted in 2002, 2004, and 2005 or on the questionnaire survey conducted by the Vietnam Institute of Economics, Vietnam Academy of Social Science in 2004 as commissioned by the Institute of Developing Economies.

The two suppliers in Group A (A1 and A2) started production of motorcycle components in 1998 and 1999, respectively. They became first tier suppliers to Honda Vietnam at that time and were among the few local firms selected by that company as suppliers during the early years of its operation. Like other state-owned enterprises in Vietnam, they were originally engaged in integrated production of a wide variety of products in small quantities. After they became Honda's suppliers, they began to specialize in specific products and production processes designated by Honda.

Two suppliers in Group B (B1 and B2) are second tier suppliers of Japanese assemblers. Both were originally manufacturers of replacement parts. They started supplying components for local assemblers around 2000 and subsequently became

suppliers to first tier foreign suppliers of Japanese assemblers. Like Group A suppliers, they came to specialize in specific production processes: B1 in plating and B2 in die-casting. Although data comparable to other cases are not available, both experienced rapid expansion of production. Starting out as small household businesses run by a few family members, they rapidly expanded sales, made investments, and became limited liability companies, each employing a few hundred employees in 2005.

Table 2. Profile of the Six Local Suppliers

	First Tier Suppliers of Japanese Motorcycle Manufacturers		Second Tier Suppliers of Japanese Motorcycle Manufacturers		Suppliers to Local Assemblers	
	A1	A2	B1	B2	C1	C2
Establishment	1969	1968	1988	1986	1987	1977
Start of Producing Motorcycle Parts	1998	1999	Replacement Parts: 1988; OEM: 2000	2001	Replacement Parts: 1990; OEM: 1999	2002
Sales (billion VND)	205	66	24	n.a.	58	17
Share of Sales from Motorcycle Parts	46%	53%	n.a. (Sales to the Taiwanese supplier accounted for 50% of total sales)	80%	60%	16%
Types of Motorcycle Parts (Production Process)	Metal Stamped Parts (Stamping)	Sprockets (Machining)	Plated Parts (specialized in plating)	Brake Components (Die-casting)	Cylinder, Piston Rings, Valves, etc.	Pistons, etc.
Customers of Motorcycle Parts	Japanese Motorcycle Manufacturers and Component Suppliers	Japanese Motorcycle Manufactureres, VMEP	Taiwanese Suppliers (second tier to Japanese assemblers); Local Assemblers	Japanese Supplier (second tier to Japanese assemblers); VMEP	Local Assemblers	Local Assemblers
Other Products	Stainless Steel Kitchenware, Interior Decoration Items, etc.	Diesel Engines, Agricultural Machinery and Parts	Components for Electronic Products	Replacement Parts	Replacement Parts	Agricultural Machinery and Components

(Source)
1) Survey conducted by Vietnam Institute of Economics, Vietnam Academy of Social Science as commissioned by the Institute of Developing Economies in 2004.
2) The author's interviews (A1: Aug. 2002, A2: Sep. 2004, B1: July 2005, B2: Aug. 2005, C1: Aug. 2004, C2: Aug. 2005).

Local suppliers in Group C (C1 and C2) were originally producers of replacement parts and various machinery components. They subsequently began to supply motorcycle components to local assemblers around the year 2000. Unlike the suppliers in Groups A and B, these suppliers produced wide varieties of components and were engaged in various production processes. They expanded their sales until 2002. However, when they were interviewed (C1 in 2005 and C2 in 2004), their customers (local assemblers) were losing market share, and both suppliers were experiencing declines in sales of

motorcycle components. C1 experienced 31% decline in sales between 2002 and 2005[17]. The sales growth rate of C2 also decreased from 27% in 2002 to only 10% in 2003.

5.2 Explaining Growth Trajectories

There were clear differences in terms of the overall growth performance between suppliers in the Japanese chains (Groups A and B) and the group of suppliers that were only in the Vietnamese-Chinese chains (Group C). This seems to reflect the overall business performance of customers. Japanese manufacturers rapidly expanded production and market share while local assemblers stagnated in these areas after 2002.

Strategies of customers turned out to be important in accounting for differences in the acquisition of production management technology aimed at improving QCD levels. Suppliers in Japanese chains, regardless of position, were specialized in specific products and/or production processes and focused on acquisition of production management technology. All suppliers in Groups A and B practiced the "5S" (*seiri, seiton, seiso, seiketsu, shitsuke*) in organizing their shop floor. Levels of the techniques practiced and the degree of penetration into the work place differed, but these suppliers introduced quality, production cost and delivery control methods, worker management techniques, and/or standard operating procedures to ensure levels of QCD required by their customers. At the same time, suppliers in Japanese chains were constrained to the narrow function of manufacturing according to the detailed drawings and specifications regarding materials, production processes, and other requirements of customers. While capabilities of local suppliers have only been emerging at this stage, the configuration of Japanese value chains discussed in the previous sections seems likely to constrain the chances of local suppliers to shift beyond manufacturing to design in the long term.

In contrast, the two suppliers in Group C had not experienced improvements in production management technology. Their workshops were not clean or organized, and standard production and quality management methods were not adopted. Particularly in the case of C1, emphasis was placed on taking on a wider variety of production processes in-house rather than improving the production management by concentrating on a particular production process. Even though local assemblers urgently needed suppliers with competence in designing the components according to changing market demand, such competence was not readily available in the pool of local suppliers, and local assemblers were not capable of assisting suppliers in developing such competence. This may indeed be why local assemblers had to depend largely on Chinese suppliers as noted in the previous section.

While customer strategies are important, they are by no means decisive. Important differences in growth patterns were found within each group, and they seem to reflect differences in supplier strategies. From the author's field research, two aspects of supplier strategies were found to be particularly important: The first was the proactive nature of suppliers relative to changes in the market and business environment. This factor proved to be particularly important for suppliers in Japanese chains[18]. The second factor is

[17] This large decline in sales was partly due to the relocation of the factory in order to obtain more space for production.

[18] A similar point is made by Nguyen Duc Tiep (2006), who argued for the role of "responsiveness" in

strategies of product and customer diversification, although at this stage it was not possible to identify which strategy was superior to others. Some suppliers were found to concentrate in producing motorcycle components, while others actively diversified into related industries. Further, suppliers could concentrate exclusively on foreign or local customers, or deliberately try to combine both types of customers.

The two suppliers in Group A exhibited different growth trajectories, and differences were related to both how proactive they were to customer demand and to their strategies of diversification. A1 expanded its relationship with Honda Vietnam much faster, and its diversification into new products and the strengthening of traditional products was more active than that of A2. By 2004, A1 had received orders from Honda for increasing varieties of pressed steel components. A1 also actively invested in new production capacity in response to Honda's increasing demand. This included construction of two plants specifically designed for production of motorcycle components. The company also diversified its products and its customer base by supplying interior decoration products for a large European buyer. On the other hand, from 1999, A2 supplied only one type of component to Honda. A2 continued to produce its traditional products, but despite the fact that it was facing the stiff competition of cheaper products imported from China, the company did not make an active effort to boost competitiveness of its existing products that included components of agricultural machinery and diesel engines. When interviewed in 2004, the vice director discussed a decision to invest in the production of transmission components for automobiles as a part of a project led and subsidized by the Vietnamese government and undertaken by the state-owned enterprise group that A2 belonged to. To the author's knowledge, such a project does not seem to have made headway as of the end of 2007.

One factor that seems to explain the different growth patterns of A1 and A2 is the difference in how proactive they were in investment strategies. Although both were state-owned, A1 adopted proactive investment strategies to actively capture new business opportunities in both business with Honda and in the development of new customers and products. Granted substantial autonomy by the local government[19] to make managerial decisions (including investments), the general director of A1 was ready to make investments in machinery even before receiving formal orders from Honda[20]. In contrast, A2 was slower and more passive in making investment decisions. As the above example of investment in production of automobile components shows, the company's investment decisions were heavily influenced by the policies of the government and the state-owned enterprise group it belonged to rather than the demand of the market. The company only invested in expanding its capacity in 2004, and this was after being pressed by Honda Vietnam.

Divergent growth trajectories were observed within Group B, and these reflected active yet different diversification strategies. B1 tried to concentrate exclusively in subcontracting relationships with foreign manufacturer by improving the production process management technology for plating. The company even employed a part-time Japanese advisor in 2005 so that the level of quality controls could be improved. Using its

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enhancing the effectiveness of knowledge transfer between Honda Vietnam and its suppliers.

[19] The company was under the supervision of the People's Committee of Hanoi City.

[20] This statement was made during the author's interview in August 2002 of the Japanese General Director of a joint venture between a Japanese component supplier and A1.

experience and its record of supplying motorcycle components to the renowned Japanese firms, the company diversified its customer base to Japanese and Taiwanese firms in motorcycle and other manufacturing industries. In contrast, B2 emphasized both transactions with its Japanese customer and production of its traditional products pf replacement parts for motorcycles and bicycles. These were seen as two pillars of the company's business. In the company's workshop, production management techniques designed to sustain QCD levels were practiced only in those lines producing components to be supplied to the Japanese customer, not in other lines producing replacement parts and components to be supplied to local assemblers. More effort was directed to distribution and branding of replacement parts rather than improvement of production and process technology.

The difference in the growth performance of Group C was more subtle than that of Groups A and B, given that both firms in Group C were facing decreasing orders from local assemblers. However, differences in how proactive these companies were in coming up with and implementing strategies to diversify their product beyond components to be supplied to local assemblers seemed likely to make a difference in the medium term. While both of these two companies were stagnating, C1 was more active than C2 in trying to sow the seeds for future growth. As sales to local assemblers declined from 2002, C1 made a decision to concentrate on its traditional products (replacement parts) and developed a new and improved version of one of its major products, valves. To learn the technology and acquire equipment necessary to develop the new product, the company sent its engineers to visit and observe a partner company's factory in Taiwan. This was regarded as a cost effective way of introducing new technology when limited capital was available for investment. While the impact of C1 launching this new product cannot yet be assessed, C2 took no substantive action to compensate for the loss of sales to local assemblers. C2 was and is a member of the same group of state-owned enterprises as that of A2, but the bulk of its sales has continued to be in machinery components that are sold to other member enterprises of the group. Behavior has not changed from what it was before the rise of local assemblers.

6. Concluding Remarks

The Vietnamese motorcycle industry has indeed achieved remarkable growth since the turn of the century. While local Vietnamese component suppliers have largely been dismissed as non-competitive, the rise of local assemblers and the ensuing transformation of value chains have opened up new opportunities for the growth of local suppliers. This has been done directly by inducing the entry of local firms into manufacturing motorcycle components and indirectly by affecting the sourcing strategies and value chain structure of Japanese motorcycle manufacturers. This paper has included an analysis of the growth trajectories of local Vietnamese motorcycle component suppliers amid dynamic transformation of the Japanese and Vietnamese-Chinese value chains in the industry, and has also included an explanation of the differences in growth trajectories.

Despite a limited industrial foundation and a short history, local component suppliers have gone through rapid growth and transformation. Preliminary analysis shows wide varieties of growth trajectories, both within and beyond the manufacturing of

motorcycle components. Among the determinants of local supplier growth patterns, the role of customers was found to be powerful, and this is congruent with findings of previous GVC research. In the motorcycle industry, Honda has strong product and brand leadership as well as thorough knowledge about manufacturing technology. It has been able to influence the global configuration of the industry and the nature of technology and innovation. It has also been able to draw a clear line between the functions that it undertakes by itself and the functions to be outsourced to the different categories of suppliers. Even the most competitive group of Japanese suppliers has had no other choice but to follow this. In contrast, local assemblers have been in desperate need of suppliers with competence in designing components, but such competence has only been found in Chinese suppliers based in Vietnam.

However, supplier strategies also seem to account for significant variations in their growth patterns. It must be emphasized that strategies of suppliers make a difference despite the fact that customer control has been very powerful and supplier capability only emerging. Though preliminary, this is an important finding in the context of GVC research that has consistently emphasized the roles of buyers or customers in governing the value chains. This finding suggests a need to direct attention to the variety of efforts by local firms to improve their competitive edge in overall business rather than only their performance in the limited range of functions they undertake in linkages with global customers.

While evidence presented in this paper on the growth of local suppliers is limited, findings constitute a good starting point for conducting further empirical investigations with larger samples based on a more refined conceptual framework. Such research may indeed uncover the mechanisms that underlie the growth of local firms amid dynamic transformations of value chains.

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