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DISCUSSION PAPER No. 97

Local Firms in Latecomer Developing Countries amidst China's Rise

—The case of Vietnam's motorcycle industry—

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March 2007

Abstract

This paper examines the impact of China's recent rise on the development of local firms in latecomer developing countries. Based on a detailed analysis of Vietnam's motorcycle industry, the paper argues that China's impact may go beyond what a trade analysis suggests. Indeed, China's rise induced a dynamic transformation in the structure of value chains within Vietnam's motorcycle industry, bringing about far-reaching consequences on the development and upgrading trajectories of local firms. The implications of the case study for the wider "global value chain" approach is also discussed.

Keywords: global value chain, motorcycle industry, Vietnam, China, upgrading
JEL classification: F23, L22, L62

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Local Firms in Latecomer Developing Countries amidst China's Rise
- The case of Vietnam's motorcycle industry –[1]

1. Introduction

With its vast, low-cost labor pool of skilled human resources as well as a firm and diverse industrial foundation built through a long history of industrialisation, China has recently emerged as the "world's factory" for a wide range of industries–from apparel and footwear to steel, electronics, and motor vehicles. Reflecting widespread concerns about China's threat, studies on China's economic performance and its implications for developing countries abound (Lall and Albaladejo 2004; Ravenhill 2006; Yang 2006). An aspect that has received particular attention in these studies is the role of foreign affiliates, which now account for more than half of China's total exports, in diversifying China's export structure towards high-tech segments, promoting technology transfer, and spurring China's participation in production sharing with other countries in the region (Lall and Albaladejo 2004; Ravenhill 2006; Lemoine & Ünal-Kesenci 2004).

In this context, exports by local Chinese firms have frequently been dismissed as "lagging behind" (Lemoine & Ünal-Kesenci 2004: 841). However, local Chinese firms have demonstrated overwhelming competitiveness in mass production of mature, standardised products at low cost. While China's competitiveness in simple labour-intensive manufacturing industries like apparel and footwear is already widely known, recently we have even witnessed the emergence of China's local lead firms with internationally recognised brands, e.g. TCL and Haier in consumer electronics. Indeed, industries that adopt mature, standardised technology are the ones where China's exports have produced a massive impact on local firms in developing countries and especially latecomer developing countries. Numerous reports document how Chinese

[1] The paper is based on the research project "Motorcycle Industry in Asia" undertaken at the Institute of Developing Economies from 2004 to 2006 and is also a revised version of the paper presented at the pre-conference workshop "Asian Drivers: China and India Shaping the Global Political Economy" for the Eighth Annual Global Development Conference in Beijing, China on 12-13 January 2007. The author gratefully acknowledges the insights provided by members of the IDE research project and the comments by participants of the workshop but takes full responsibility for any remaining shortcomings.

goods are dominating the market for consumer goods in developing countries in Southeast Asia, South Asia, and Africa[2]. Against this background, one of the important questions facing developing countries today is: how will China's rise affect the development trajectories of indigenous firms in latecomer developing countries?

While previous attempts to explore the impact of China's rise have largely centred around analysis of trade data (Lall and Albaladejo 2004; Yang 2006; Lemoine & Üna-Kesenci 2004; Stevens and Kennan 2006), the impact of China's rise on firms in developing countries may go far beyond what trade figures suggest. An important aspect that tends to be overlooked in the analysis of trade is the distinction between the nature of the goods, i.e., whether they are raw materials, intermediate goods, or goods for final consumption, which has important implications for the channels through which China's rise affects local firms. Even where the nature of the goods is taken into account (e.g., Lall and Albaladejo 2004), very few studies consider the reaction from the local firms – the strategies pursued, as well as the factors, external or internal to the firms, that influence the viability of the strategies. Given the growing importance of the issue, what is mostly lacking and is in need are studies that go beyond the analysis of trade to specifically examine the different channels through which China's rise affects the development trajectories of local firms in a specific industry.

This paper is an attempt to fill that gap by presenting a case study of the motorcycle industry in Vietnam. While China itself is the world's largest market and producer of motorcycles, over the past several years local Chinese firms have actively sought to capture their share of the market abroad, especially in developing countries. Vietnam was the first major destination for China's motorcycle exports, as seen in the massive numbers of motorcycles exported to Vietnam in the years 1999 to 2001. Even though the exports of motorcycles diminished after 2001, the engagement of Chinese firms in Vietnam has continued in the form of direct investment and exports of parts and components. Based on a detailed analysis of Vietnam's motorcycle industry, this paper

[2] For instance, see "Africa finds trade ties to China lucrative – Businesses adjust to rise in Asian goods as restrictions fall," *Asian Wall Street Journal*, 5 Dec. 2006 on Africa and "Chinese imports can hurt domestic industry," *The Nation*, 3 Nov. 2005 on Pakistan. In the case of Vietnam, with the rapid expansion of two-way trade, China has emerged as its largest trading partner. Massive inflows of Chinese goods have been observed in numerous industries extending from garments and footwear to steel, agricultural machinery and automobiles.

argues that China's rise as an exogenous shock transformed existing value chains governed by Japanese lead firms and gave rise to new value chains organised by local assemblers in collaboration with Chinese firms, thereby substantially changing the development and upgrading trajectories for local firms. By doing so, the paper seeks to present a few general implications for wider global value chain (GVC) literature and the upgrading of local firms.

The rest of the paper will be organised as follows. Section 2 discusses China's recent rise in the motorcycle industry. Section 3 presents how the GVC approach can be applied to analyse the development of local firms in this industry. Section 4 looks at the development of the motorcycle industry in Vietnam, focusing how China's rise transformed value chains within the industry. Section 5 analyses the development paths and upgrading trajectories of Vietnam's local suppliers, focusing on three types of firms incorporated into different types of value chains. Section 6 concludes the paper.

2. The Motorcycle Industry and China's Rise

The motorcycle industry has long been characterised by the overwhelming dominance of four Japanese lead firms. This section discusses how their dominance has been established and exercised and how China's rise has challenged their dominance.

2.1 Japanese dominance and the market shift towards developing countries

Figure 1 shows trends in the production and sales of motorcycles from 1975 to 2005, highlighting some prominent features of the industry.

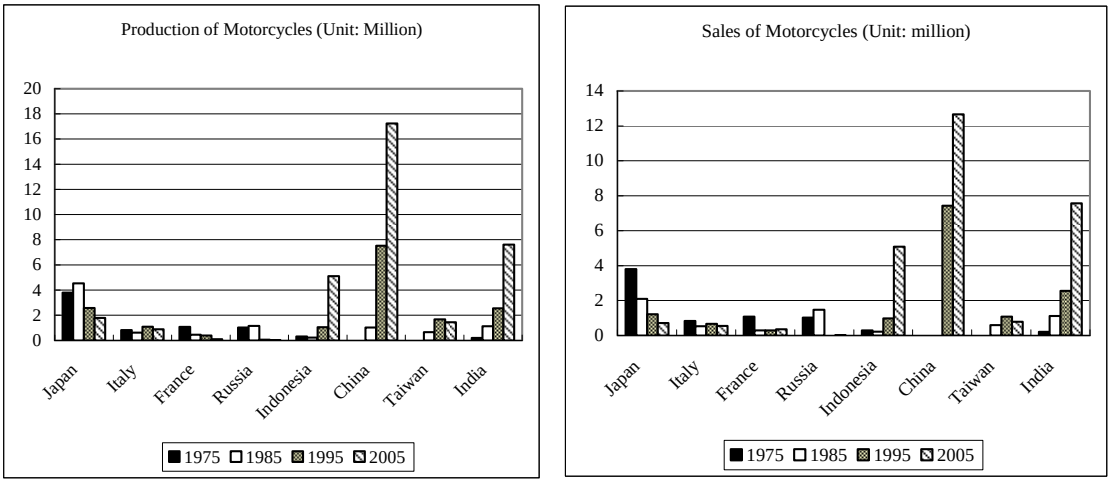
First, large markets of motorcycles also tend to be major producers, although a few major producers have also become large exporters of the products.

Second, up to the 1980s, Japan stood out among the major producers of motorcycles. A breakthrough came in 1958, when Honda launched the highly acclaimed "Supercub[3]" and established an integrated mass production system that guaranteed superiority in

[3] The derivative models of "Supercub" are still popular in developing countries today, especially Southeast Asia.

terms of quality and price over its competitors including the major producers in Europe (Otahara 2000). Honda, together with the three firms that successfully followed suit (namely, Yamaha, Suzuki and Kawasaki), eventually came to be known as the four Japanese giants. These four giants established and maintained overwhelming dominance on a global scale for decades.

Figure 1 Production and Sales of Motorcycles 1975-2005



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

Third, the major producers-cum-markets have shifted over time. Despite variations across countries or regions, the experience of Asian countries analysed in Sato and Ohara eds. (2006) shows: (1) the demand for motorcycles as a means of transport increases rapidly at a relatively early phase of economic development; and (2) as economic development proceeds, the industry enters the "demand saturation" phase. During this phase, automobiles gradually start to replace motorcycles, and the demand for motorcycles shifts towards high-end leisure and sports-use models. Reflecting this pattern, major markets have shifted from Japan, France and Italy up to the 1980s to developing countries since the 1990s.

As the major market started to shift to developing countries, the four Japanese giants started to export their products abroad and, subsequently, to invest abroad in local production of motorcycles[4]. As of 1996, production by factories of the four giants in

[4] As succinctly expressed in Honda's strategy "to produce where the demand is," Japanese lead firms have attempted to manufacture and deliver products according to the local customers' needs by

Japan (i.e., including exports) accounted for approximately half of the global production of motorcycles (Otahara 2000). If production by foreign firms that received technology transfer from the four Japanese giants is included, over 70% of the global production of motorcycles was under the influence of the four Japanese giants (ibid.).

2.2 China's rise

The past decade witnessed an overwhelming shift in gravity of the industry towards developing economies. By 2005 China, India, and Indonesia had become the top three producers of motorcycles in the world, together accounting for 74.9 % of the number of motorcycles produced globally (Figure 1). Of particular note, China has quickly expanded its production of motorcycles since the early 1990s to emerge as the world's largest producer of motorcycles, producing over 17 million motorcycles in 2004, 3.9 million of which were exported overseas (China Automotive Technology & Research Center and China Automotive Industry League, 2005).

This shift in the gravity of the industry is accompanied by another remarkable change – the emergence of local motorcycle firms in developing countries, especially China[5]. In China, the number of motorcycle firms increased consistently, reaching as many as 154 in 2003[6]. In a market characterised by a dispersed and unstable structure, numerous local Chinese firms competed relentlessly, mainly on the basis of price, in sharp contrast with the oligopolistic market structure established in Japan in the 1960s (Otahara 2000). These local firms were producing largely homogeneous products, that is, imitations of foreign (mostly Japanese) base models or models that incorporate some minor changes to them[7].

It is in China that the Japanese giants, for the first time in their history, failed to

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gradually transferring production of parts, materials and final products, distribution and after-sales service, and a part of product development to countries with large markets for motorcycles.

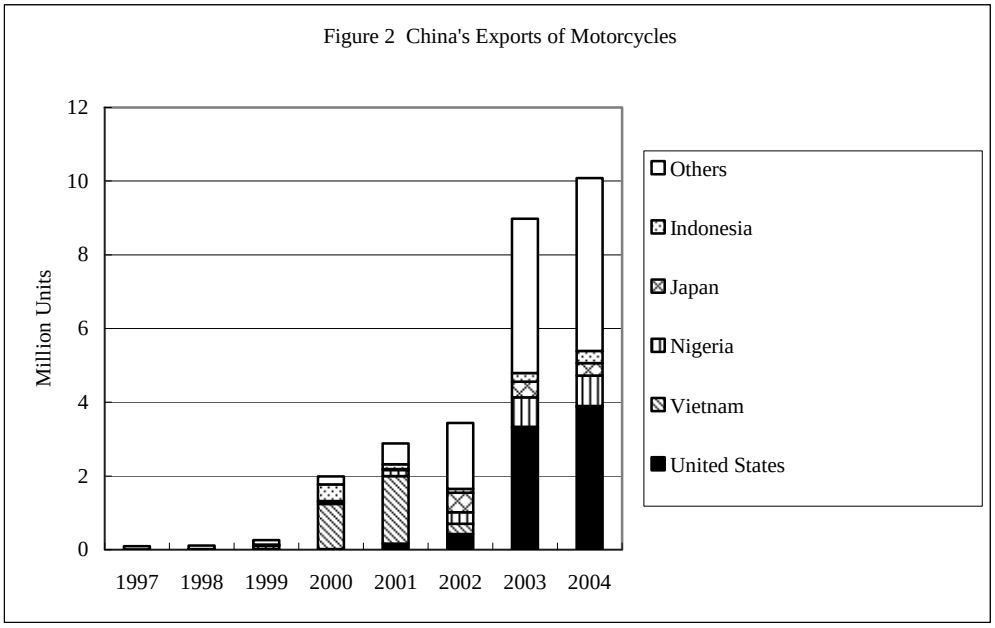
[5] Local motorcycle firms in Taiwan and India also experienced growth. See Sato (1999, 2006) on Taiwan and Shimane (2006) on India.

[6] This figure only includes officially registered firms (Ohara 2006).

[7] Ohara (2006) calls the product development undertaken by local Chinese firms as "minor-change-type" product development, as opposed to the "major-change-type" product development undertaken by Japanese lead firms. Among various base models, Honda's C100 (commonly known as "Supercub") is most commonly adopted by Chinese firms. The models based on C100, introduced by Chinese firms, proliferated throughout the Vietnamese market.

establish a leading position vis-à-vis local motorcycle firms. As of the end of the 1990s, about twenty foreign joint venture firms in China (ten of which were established by the four Japanese giants) together accounted for just 5% of the market (Ohara 2006: 21). Even in 2005, Sundiro Honda Motorcycle Co., Ltd., the largest of the joint venture firms, ranked the eighth in terms of quantity of sales and accounted for just 5.7% of the market, while all the other top-ten motorcycle firms were local firms (Ohara 2006: 26).

Figure 2 China's Exports of Motorcycles



(Source) China Customs data taken from World Trade Atlas.

After the turn of the century, the Chinese motorcycle firms started to make their strides into overseas markets through exports or direct investment. Figure 2 shows the trend and destination of China's motorcycle exports since the late 1990s. Vietnam, which is to be examined in detail in the two subsequent sections, was by far the largest destination for China's motorcycle exports from 1999 to 2001, though the destination subsequently shifted to other countries.

2.3 The development of local firms as suppliers under Japanese dominance – The cases of Thailand and Indonesia –

In the meantime, the four Japanese lead firms had established a firm position in the Southeast Asian market. In Thailand and Indonesia, the Japanese lead firms established joint ventures with local firms to assemble imported "completely knocked down" (CKD) parts from the late 1960s to the early 1970s. Through decades of operation, these joint ventures established firm control of the market by consolidating production and procurement, marketing, distribution, and after-sales service; and the four Japanese lead firms together accounted for 97% of the market in Thailand and 90% in Indonesia in 2004 (Higashi 2006; Sato 2006). Recently, Honda, Yamaha and Suzuki even established regional headquarters and/or research and development centres in Thailand to undertake product planning and design for the regional models in collaboration with the headquarters and research institute in Japan.

An important point to note is that Chinese motorcycles did not succeed in penetrating these markets[8]. Apart from the policies (e.g., import controls and product standards) that effectively blocked Chinese products from flowing in, consumers in both countries "rejected" Chinese motorcycles due to their poor quality, lack of after-sales service, and the difficulties of trading in the secondhand motorcycle market[9].

The operations of Japanese lead firms in Thailand and Indonesia encouraged development of local parts suppliers. Since local content policies were in place in both countries since the 1970s, the Japanese lead firms were compelled to increase the local content ratio over time. Ironically, the local content ratio made a leap after import tariffs on motorcycle parts were reduced and local content policies were abandoned towards the end of the 1990s. The local content ratio of major Japanese lead firms has reached 98% in Thailand (Higashi 2006) and 91% in Indonesia (Sato 2006). The highly localised sourcing, which is in sharp contrast with globalised sourcing patterns seen in industries like apparel or electronics, is explained by a number of factors: sufficiently large local markets; ease of entry for local firms due to the use of mature technology and small size of the product (compared to automobiles, for instance); non-standardised nature of the parts, i.e., parts that are specifically designed to meet the road conditions,

[8] In Indonesia, Chinese motorcycles temporarily captured a market share of 18% in 2000, but their market share quickly declined to less than 10% in 2002 (Sato 2006).

[9] Sato (2006) argues that the oligopolistic market structure dominated by Japanese lead firms is sustained by consumers who are used to quality and after-sales services guaranteed by Japanese lead firms throughout the long years of their operations.

climate, and consumers' preferences specific to the country; and the need for closely coordinated adjustments between the parts.

3. The "Global Value Chains (GVC)" Approach

The GVC approach has become a powerful tool to analyse the paths to spurring competitiveness, learning and innovation, and upgrading of local firms in developing countries[10]. The approach tries to link the concept of "value chains," or the sequence of value-added activities that are required to get a certain set of products to market (Sturgeon 2000), with the globalization of industries that has progressed in tandem with the fragmentation of production and distribution activities. The key driver of these processes has been the global buyers or producers, often referred to as "lead firms", which play a crucial role in coordinating and governing the value chains. Over the past few decades, these chains have come to increasingly incorporate firms from developing countries, often as suppliers of products or parts/components to the lead firms.

One of the central contentions of the GVC approach is that that insertion into these chains offers firms from developing countries with certain opportunities and limitations for development and upgrading of capabilities. This contention has been supported by numerous case studies on industries led by powerful global buyers that have developed highly globalised production networks targeting markets in industrialised countries, such as apparel, footwear, furniture, electronics, and automobiles (e.g., Schmitz and Knorringa 2001; Bazan and Navas-Alemán 2004; Palpacuer, Gibbon, and Thomsen 2005; Quadros 2004). The underlying assumption is that producing for global lead firms provides the local firms with access to the huge market in industrialised countries that these firms exercise control over, and requires them to meet the stringent global standards in terms of product quality, safety, environment, and labour that they impose on suppliers[11].

The motorcycle industry, with highly localised production targeting the markets in

[10] For the key ideas and concepts adopted in the GVC approach, see Gereffi, Humphrey, Kaplinsky, and Sturgeon (2001), Sturgeon (2001), Humphrey and Schmitz (2001, 2004).

[11] Nadvi and Waltring (2004) discuss the typologies of global standards and their emerging trends. Ponte and Gibbons (2005)

developing countries, is clearly at odds with the sectors frequently taken up in the GVC literature. However, if the GVC approach is about understanding the nature of the relationships between firms that participate in the networks of global trade and their implications for development (Humphrey and Schmitz 2001:19-20), the nature of the industry itself should not preclude us from applying the approach for analysis of the motorcycle industry. Motorcycle firms should be refereed to as "lead firms" and parts and components manufacturers should be referred to as "suppliers." Put in the GVC framework, those characteristics of the motorcycle industry, such as a greater scope for participation of local firms in supplying parts and components, as implied by the highly localised sourcing pattern mentioned above, together with the powerful role of the Japanese lead firms in setting parameters for local suppliers to operate within the chains organised by them, suggest the viability of the GVC approach in analyzing the development of local suppliers that participate in the value chains governed by Japanese lead firms.

The Thai and Indonesian cases, briefly discussed above, may be helpful in illustrating the possible application of the GVC approach to the motorcycle industry. While most value chain activities – from manufacturing of parts and components to assembly, marketing, retail sales and after-sales service – are undertaken where the market is, i.e., in Thailand and Indonesia, there are a few important exceptions. The first exception is product development and design. As the activities with the highest value added and the utmost strategic significance for the lead firm, these activities are undertaken in the lead firm's headquarters in Japan in collaboration with regional headquarters in Thailand. The second is raw materials and materials for making components. Especially in the case of Indonesia, much of the raw materials still have to be imported from abroad (Sato 2006). The participation of local firms has been mainly in the production of parts and components, where some local suppliers managed to develop as suppliers by striving to meet the "quality, cost and delivery" (QCD) requirements imposed by the lead firms[12]. Here, the key to understanding the development trajectory of local firms is in the nature of their relationship with the lead

[12] Though local suppliers in Thailand and Indonesia both followed roughly similar paths to development within their relationships with Japanese lead firms, there are some variations across countries and across firms within each country. For details, see Higashi (2006) on Thailand and Sato (2006) on Indonesia.

firms and its implications for the capability development of local suppliers.

4. The Emergence and Transformation of Japanese and Local Chinese Chains in Vietnam's Motorcycle Industry

Though Vietnam's market for motorcycles first started to grow only after the early 1990s, the country is currently the third largest producer and market for motorcycles in Southeast Asia after Indonesia and Thailand. We shall observe in detail the evolution of Vietnam's motorcycle industry, focusing on the emergence and transformation of different types of value chains in the industry amidst China's rise.

4.1 Vietnam's motorcycle industry – how it got started

Vietnam as a market of motorcycles has a long history dating back to the 1960s. During the Vietnam War, tens of thousands of "mopeds" were imported into South Vietnam each year, mainly from Japan and the US (Fujita 2006). After the end of the war these secondhand motorcycles remained, while motorcycles continued to be imported from Eastern Europe (Beresford and Dang Phong 2000). It was under the severe road conditions and the shortage of fuel and replacement parts during the central planning period that the Vietnamese formed a strong preference for secondhand "Hondas" made in Japan, which were known to be extremely durable, economical, and practical. After market-oriented economic reforms called *doi moi* (renovation) started in 1986, demand for motorcycles started to increase gradually, and the import of secondhand Honda-brand motorcycles through official channels, especially from Japan and Thailand, resumed.

Vietnam's history as the production base of motorcycles only dates back to the mid-1990s, when the government launched an import substitution policy by erecting trade barriers and providing incentives for foreign direct investment in the motorcycle industry. Attracted by the growing market, several motorcycle firms began assembling

"incompletely knocked down" (IKD) parts[13] by the late 1990s (Table 1).

Table 1 Major foreign motorcycle firms in Vietnam

Name of the firm	Year of License	Ownership structure
Vietnam Manufacture & Export Processing Co., Ltd. (VMEP)	1992	Chinfon Group (Taiwan, 100%)
GMN Automobile & Motorcycle Parts Manufacture JV Co., Ltd.	1995	Chaikomol Business (Thailand, 30%), SKB (Thailand, 10%), New Chip Xeng (Laos, 30%), General Export Import Co. (Vietnam, 30%)
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) Survey by the author; Survey commissioned to the Vietnam Institute of Economics, Vietnam Academy of Social Science by the Institute of Developing Economies in 2004.

Table 2 Sales of Honda-brand motorcycles in Vietnam (1992-2003) Unit: thousand units

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total sales of motorcycles	100	300	368	420	499	260	379	459	1,074	1,960	1,800	1,300
Total Sales of Honda-brand motorcycles (a)	n.a.	150	195	212	188	128	261	291	345	246	390	429
(Honda's market share)	n.a.	50%	53%	50%	38%	49%	69%	63%	32%	13%	22%	33%
Production in Honda Vietnam (b)	0	0	0	0	0	0	82	99	166	163	389	420
Exports of Honda Vietnam (c)	0	0	0	0	0	0	0	0	0	0	0.8	24
Sales of imported Honda-brand motorcycles (d)	n.a.	150	195	212	188	128	179	192	179	83	2	33

(Notes)

1) (d) is calcalculated as (a) - { (b) - (c) }.

2) "Production of Honda Vietnam" includes production of GMN, a joint venture firm established by Thai, Lao and Vietnamese firms engaged in production and distribution of Honda-brand motorcycles in respective countries under the leadership of Asian Honda Motors in Thailand.

(Source) "Reference Materials for Seminar on Honda's Business in Asia" available on the website of Honda Motor Co., Ltd.

Contrary to the expectations of the foreign lead firms, the growth of the market remained stagnant throughout the 1990s. Moreover, the Japanese lead firms had to compete with the products of their own group firms abroad, especially in Thailand and Japan. Despite the high tariffs and non-tariff barriers imposed on motorcycles, new and secondhand Japanese-brand motorcycles continued to be imported as the consumers maintained their preference for products "Made in Japan" over "Made in Thailand", and "Made in Thailand" over "Made in Vietnam." As of the late 1990s, "Honda" brand motorcycles imported from abroad accounted for around half of the market (Table 2). Still, in an oligopolistic market, foreign motorcycle firms were able set extremely high prices that exceeded the high costs of operations, which enabled them to enjoy

[13] This means that, unlike assembly of CKD parts, the motorcycle firms were required to source at least certain parts within the country.

substantial rent. For instance, the price of “Super Dream” launched by Honda Vietnam in 1998 was 28 million dongs (approximately US$2,000), only slightly lower than the prices of Honda brand motorcycles imported from Japan or Thailand, which ranged from US$2,200 to 2,500.

In short, as of the late 1990s, the Japanese lead firms had just started their operations and were yet to establish firm control of the market or to develop local production networks in Vietnam. The Japanese lead firms failed to recognise the vast potential demand for low-priced motorcycles in the Vietnamese market.

4.2 The “China shock”

The above situation was completely transformed by the “China shock”. As Chinese motorcycle firms faced stagnant sales in the domestic market in the mid-1990s and looked for an outlet for growing inventories, they recognised Vietnam as a promising market for low-priced motorcycles. On the Vietnamese side, as well, some traders were starting to explore the possibilities of making profits by importing motorcycles from China.

Table 3 Vietnam's Motorcycle imports Unit: Million US$

(1) Completely-Build-Up Units

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
China	2	2	1	0	45	419	426	50	6	8
Japan	108	153	59	27	19	21	14	9	15	5
Thailand	85	99	60	49	44	52	10	0	0	1
Hong Kong (re-export)	n.a.	n.a.	2	2	4	5	12	24	21	16
Taiwan	n.a.	21	14	20	7	3	3	11	6	3
Indonesia	n.a.	10	5	5	1	3	6	22	13	8

(2) Parts and Components

	Type of parts	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
China	engine	0	0	0	0	0	5	50	80	23	46
	others	0	0	0	1	2	19	35	52	36	46
Thailand	engine	0	0	0	0	0	3	0	0	0	0
	others	0	3	16	46	50	80	56	51	40	58
Japan	engine	0	0	0	0	0	0	0	0	0	0
	others	0	0	0	3	3	4	10	13	7	7
Taiwan	engine	n.a.	0	0	0	0	0	0	1	0	1
	others	n.a.	7	4	6	8	28	28	59	49	64

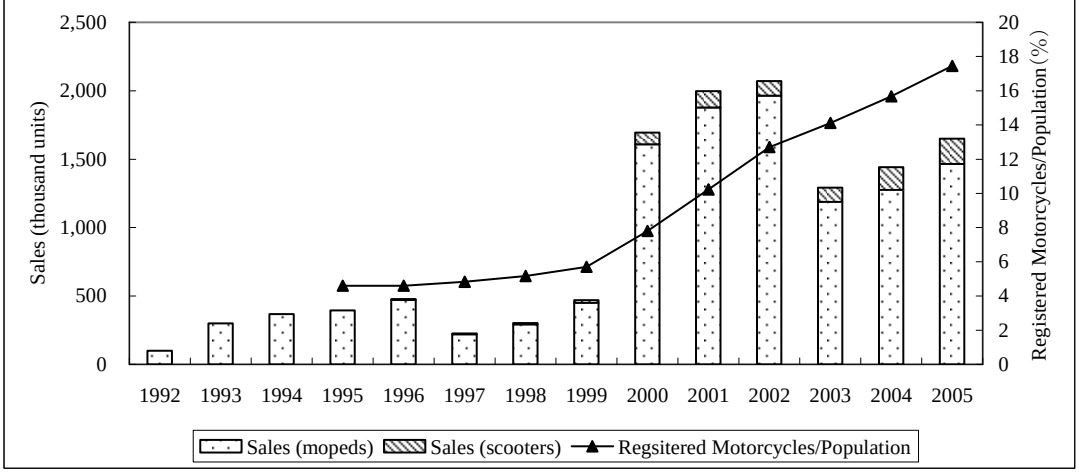
(Notes) The above figures are export data reported by exporting countries in CIF (instead of FOB).

(Source) Calculated by the author based on customs data of exporting country taken from World Trade Atlas.

Between 1999 and 2001, the number of motorcycles imported from China into

Vietnam surged dramatically, peaking in 2001 (Table 3). Since the Vietnamese government prohibited imports of completely-built up units in 1998 and implemented local content policies in 2001, "Chinese motorcycles" had to be imported as knocked-down kits and assembled by local firms (hereinafter referred to as "local assemblers") in Vietnam. As of 2001, 51 local assemblers had emerged. As the local content policy had been implemented since 2001, the Vietnamese traders importing Chinese knocked-down kits claimed a false local content ratio, much higher than the actual ratio, to the Vietnamese authorities in order to evade import tariffs.

Figure 3 Sales of Motorcycles in Vietnam



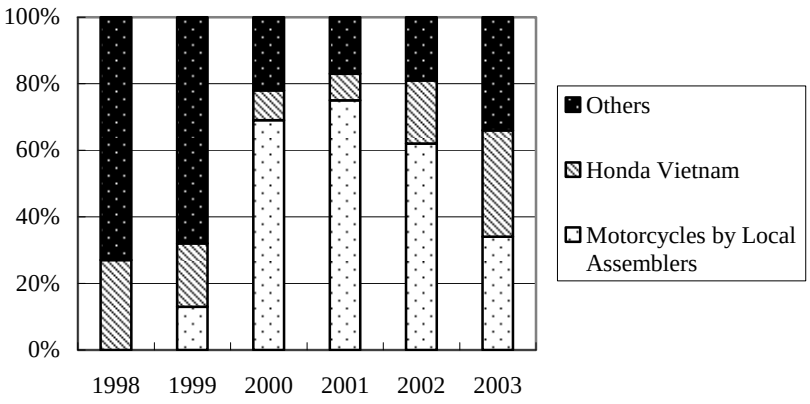
Source: Honda Motor Co., Ltd. *Sekai Nirinsha Gaikyo (World Motorcycle Facts & Figures)*, 2006.

The impact of the "Chinese motorcycles" was enormous. It significantly reduced the price of the motorcycles from the previous 28 million dongs to around 10 million dongs in 2000, and further down to 6.3 to 8 million (US$450 to 500) in 2001[14]. With their low prices, the Chinese motorcycles penetrated a huge unexploited market – the middle- and low-income population in urban and rural areas. This, in effect, significantly expanded the market, with the annual sales growing from 370,000 units in 1998 to 2 million in 2001 (Figure 3). In 2001, "Chinese motorcycles" captured over 70% of this significantly enlarged market (Figure 4). At the same time, the rapid proliferation of Chinese motorcycles induced numerous social problems, such as traffic accidents, traffic congestion, air pollution, and violation of intellectual property rights (Ueda

[14] *Oto – Xe may Viet Nam (Vietnamese Automobiles and Motorcycles)*, July 2001.

2003).

Figure 4 Market Share of Motorcycles in Vietnam



(Notes)
"Others" include imported motorcycles and motorcycles produced by foreign lead firms based in Vietnam other than Honda Vietnam.
(Source) Author's interview with Honda Vietnam in Sep., 2004.

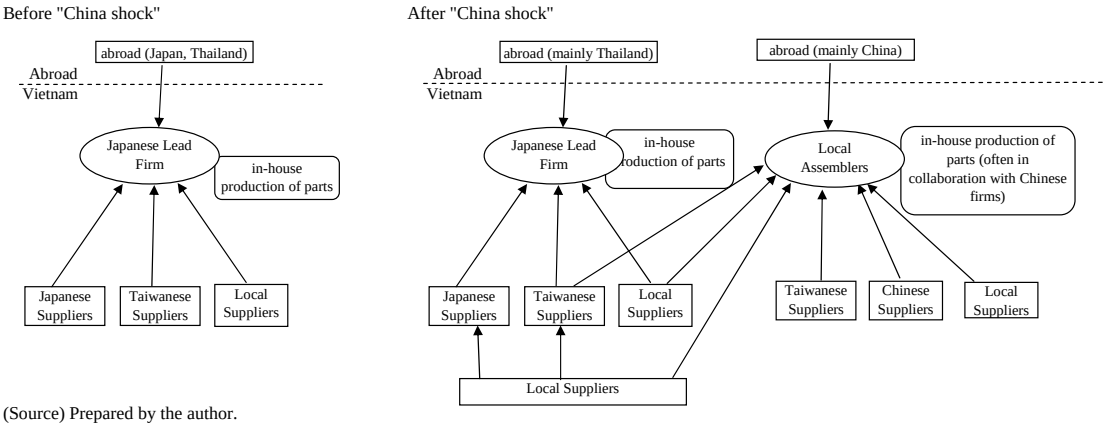
In the end, the shock did not persist for long, as demonstrated by a sharp fall in the market share of Chinese motorcycles after 2002 (Figure 4). Japanese motorcycle firms, seeing their market share significantly diminished, made serious attempts to re-capture the market. In 2002, Honda Vietnam launched a new model, “Wave alpha”, priced at 10.8 million dongs, nearly one-third of its previous models. Though more expensive than “Chinese motorcycles,” the new model was applauded by Vietnamese consumers who were starting to recognise quality problems in “Chinese motorcycles.” After 2002 Honda quickly recovered its market share, and the sales of products made by Honda Vietnam exceeded the sales of imported Honda-brand motorcycles for the first time (Table 2). Yamaha Vietnam, on the other hand, rejected the “low-priced model” strategy and consistently emphasised high quality and fashionable design targeting the young generation. Yamaha’s new models gained increasing popularity among the newly emerging prosperous population in the urban area.

In contrast, local assemblers faced difficulties after 2002 due to a number of factors: quality problems that prompted Vietnamese consumers to turn to foreign-brand motorcycles; harsh price competition as foreign motorcycle firms significantly reduced

their prices; and strengthening of import controls, product standards, and regulations on motorcycle assemblers by the Vietnamese government[15]. As their market share quickly eroded (Figure 4), some of the assemblers abandoned their motorcycle assembling business, while others continued their operations on a smaller scale. Those that continued their operations attempted to depart from simple assembly of Chinese knocked-down kits. These firms sought to advance towards becoming full-fledged motorcycle firms by developing their own brand for motorcycles, building their own distribution channels, undertaking in-house production of certain core parts, and/or upgrading the quality of their products by sourcing parts from Taiwanese, Korean or local suppliers in Vietnam.

4.3 The transformation of value chains within Vietnam's motorcycle industry

Figure 5 Transformation of Lead Firm-Supplier Relationships in Vietnam's Motorcycle Industry



(Source) Prepared by the author.

The "China shock", together with the ensuing responses from the government, consumers, and firms, significantly transformed the value chains within the industry. Figure 5 compares the lead firm-supplier relationships before (around 2001) and after (2004-2005) the "China shock", based on the author's survey of two major Japanese motorcycle firms and their Japanese and Taiwanese first-tier suppliers in 2001/2002 and

[15] Decision of the Minister of Industry No.24/2002/QD-BCN on June 10, 2002 issuing the regulation on criteria for motorcycle-manufacturing and/or motorcycle assembling enterprises; Decision of the Minister of Communications and Transport No.2557/2002/QD-BGTVT on August 16, 2002 promulgating the regulation on the inspection of quality, technical safety and environmental protection in the manufacture and assembly of motorcycles and mopeds of all kinds.

2004/2005, as well as several local motorcycle assemblers and their suppliers in 2002 and 2004/2005.

Before the "China shock", the Japanese lead firms were not under strong pressure to increase local content – at least until 2001, when the local content policy (announced at the end of 1998) was implemented. At this stage, these firms sourced parts mostly from abroad (especially Japan and Thailand) as IKD kits as well as from their own factories (i.e., in-house production) and Japanese and Taiwanese suppliers that followed their lead to invest in Vietnam[16]. Accordingly, the "Japanese chains" were only beginning to evolve, and only a few local suppliers were incorporated into them. Although there were numerous local firms engaged in the production of "aftermarket" or replacement parts, they were outside the procurement networks of foreign lead firms[17].

As imports of knocked-down part kits from China increased in 1999-2001, new value chains led by newly emergent "local assemblers"[18] (hereinafter referred to as "local Chinese chains") started to develop. However, it is very difficult to articulate the organisation of local Chinese chains at this stage. Available pieces of evidence suggest that the sourcing of local assemblers combined Chinese and locally made parts, but it is extremely difficult to confirm the proportion of Chinese and local parts. To register higher-than-actual local content ratio in order to qualify for lower import tariffs, local assemblers imported large numbers of Chinese IKD parts with "Made in Vietnam" labels, many of which were resold after being imported to Vietnam[19]. This resulted in the proliferation of motorcycle parts without any indication of origin. Some local assemblers also report that they sourced some parts from local firms when Chinese part

[16] 13 Taiwanese suppliers followed Sanyang, the Taiwanese motorcycle firm, and set up subsidiaries near its factory in the mid-1990s (Chen and Jou 2002). Some Japanese suppliers also followed Honda, but the number was smaller.

[17] According to the author's interviews with a Japanese expert who investigated motorcycle parts manufacturers in Ho Chi Minh City in the mid- to late 1990s, numerous local small-scale firms and households were engaged in the production of aftermarket parts, including piston, piston rings, cylinders, gaskets, crankshafts, valves, and sprockets. These firms and households included those that had been engaged in machinery parts since the central planning period (before 1986) and others that entered after the late 1980s as the demand for motorcycle parts increased.

[18] In many cases, firms registered as "assemblers" turned out to be traders without production lines; instead of assembling the parts themselves, they subcontracted the assembly to other local firms (the author's interview with a state-owned assembler, and another state-owned firm that assembled motorcycles only for a few years around 2001-2002, conducted in 2002 and 2005 respectively).

[19] "Dirty deals on bike parts," *Vietnam Investment Review*, No.524 Oct.29-Nov.4, 2001; Fujita (2006).

kits included defective or rusty parts[20].

Table 4 Procurement of Parts by Two Japanese Lead Firms in Vietnam

Name of the Lead Firm		MA		MB	
Timing of Survey		July, 2001	Sep., 2004	Aug., 2002	Sep., 2004
Local Content Ratio		52%	83%	50%	74%
Number of Suppliers in Vietnam	Japanese	15	18	10	23
	Taiwanese	0	12	14	22
	Korean	0		1	2
	Local	5	13	1	3
	Total	20	43	26	52

(Source) Author's interviews.

After 2002, the Japanese chains went through a significant transformation, and the local Chinese chains started to take on a clearer shape. There are three important factors underlying the transformation within the Japanese chains: (1) the local content policy, which was originally introduced in the end of 1998 but came into effect only in the beginning of 2001; (2) the need to reduce production costs in order to compete with the "Chinese motorcycles"; and (3) the increased volume of production as they recovered market shares in an enlarged market. All of these factors encouraged an increased use of locally sourced parts including those of local suppliers. Particularly, in developing the new low-priced model, Wave alpha, Honda imposed substantial cost reduction targets on virtually all suppliers. Honda even announced that it was ready to switch suppliers as long as the alternative suppliers fulfilled the required standards and their costs were lower than that of the existing ones, regardless of nationality[21]. Table 4 shows that the two Japanese lead firms, MA and MB, significantly increased the local content ratio between 2001/2002 and 2004. The number of local suppliers newly incorporated into the Japanese chains increased but was still limited. Particularly in the case of MB, the increase in the local content ratio was realised mainly by increased procurement from Japanese and Taiwanese suppliers in Vietnam.

[20] Based on the author's interview in 2005 with a state-owned enterprise that used to assemble motorcycles temporarily.

[21] Based on the author's interview with Honda Vietnam and Honda Thailand in August to September, 2004. Also according to the author's interview with Honda Vietnam, they even adopted 28 types of parts produced by Chinese firms when they launched Wave alpha. The managers of two Japanese suppliers in Vietnam, to which Honda contributes capital, interviewed by the author in 2002 and 2004 respectively, remarked that they were at risk of losing transactions with Honda if they failed to achieve the cost reduction targets set by Honda.

Table 5 The number of second-tier suppliers used by foreign first-tier suppliers

First-tier supplier	The number of Second-tier Suppliers				Main Processe Undertaken or Types of Parts Produced by the Second-Tier Suppliers
	Japanese	Taiwanese/ Korean	Local	Total	
PM (Japanese)	10		14	24	diecasting, polishing, heat treatment, plasit injection molding
PN (Japanese)	1	3	2	6	diecasting
PO (Taiwanese)	1	4	40	45	diecasting, plastic injection molding, wires, housings
PP (Taiwanese)	1	13	8	22	stamping, cutting, plating, washers
PQ (Taiwanese)	0	15		15	n.a.
PR (Korean)	0	5	45	50	plastic injection molding, etc.

(Source) Author's interviews conducted in Aug.-Sep. 2004 and July- Aug. 2005.

Another change within the Japanese chains is that the first-tier foreign suppliers (Japanese and Taiwanese) started to source sub-components and materials from local second-tier suppliers (Table 5). According to a Japanese supplier PM, they responded to the Japanese lead firm's pressure for cost reduction, initially by replacing the imported parts with parts sourced from Japanese second-tier suppliers in Vietnam, and then eventually by replacing the parts sourced from the Japanese second-tier suppliers with parts sourced by Taiwanese or local second-tier suppliers[22].

The local Chinese chains also went through an important transformation. In response to the local content requirement and the newly introduced standards on products and motorcycle assembling firms, some local assemblers started to produce some parts in-house and to source parts from Taiwanese, Chinese and local suppliers based in Vietnam. One of the five local assemblers surveyed by the author achieved a local content ratio of 90% in 2003, while the average was 63%. In-house production of parts was often achieved in collaboration with foreign – mainly Chinese – firms[23].

5. The Development Path and Upgrading of Local Suppliers

[22] Based on the author's interview in September 2004.

[23] Among the five local assemblers surveyed by the author in 2004 and 2005, three firms revealed the sources of their technology for production of motorcycles and core components. All three firms mentioned China, while two of them also mentioned Korea and Taiwan, respectively, as additional sources. The local assembler with the largest market share has a joint venture with a Chinese firm for mass production of motorcycle parts (Fujita 2006).

This section shifts the focus from the structure of "value chains" to "local firms" within the chains, and attempts a preliminary analysis on the development path and upgrading of local suppliers. While the upgrading trajectories of "local assemblers" also constitute an important agenda for research on the development of local firms[24], this paper focuses specifically on the development path and upgrading of local firms as suppliers.

5.1 Typology of local firms and the survey sample

Given the transformation of the value chains discussed above, this section specifically focuses on three types of local suppliers: (1) first-tier suppliers of Japanese lead firms, (2) second-tier suppliers of Japanese lead firms, and (3) suppliers of local assemblers[25]. Comparison of the three types of suppliers is expected to shed light on how the different nationalities of the lead firms governing the value chains and the different positions of local firms within the value chains affects the upgrading of local firms. In addition, the above three categories are expected to cover a sufficiently large proportion of the local suppliers, given the tendency of Taiwanese and Chinese lead firms to source from Taiwanese and Chinese suppliers, respectively[26].

The survey samples are listed in Table 6. The samples cover six first-tier suppliers of leading Japanese firms, three second tier suppliers of Japanese lead firms, and three suppliers of local assemblers, all surveyed by the authors between 2002 and 2005. Some

[24] The author's preliminary analysis on the local assemblers is in Fujita (2006), which can be briefly summarised as follows. (1) Those assemblers that emphasised learning through active acquisition of capabilities in production, branding, and distribution have largely stumbled, facing difficulties in competing with powerful Japanese lead firms. (2) The few local assemblers that performed well were the ones that pursued low prices by relying on Chinese counterparts for production of parts and without active strategies to build their own brands or distribution networks, which implies only limited accumulation of capabilities within the local assemblers.

[25] In cases where a local firm was supplying parts to both a Japanese lead firm and a local assemblers, the firm is categorised under first- or second-tier supplier to Japanese lead firms. Those firms that supplied parts only to local assemblers are categorised here.

[26] According to a survey conducted by the Vietnam Institute of Economics in 2004, both VMEP (a subsidiary of the Taiwanese motorcycle firm, Sanyang) and Lifan Vietnam (a subsidiary of the Chinese motorcycle firm, Lifan) use very limited numbers of local suppliers. However, this is not to deny the need to study the upgrading trajectories of local second-tier suppliers of VMEP and Lifan to see if they differ substantially from that of the three groups of local parts firms analysed in this section.

of them were surveyed more than once.

Table 6 The Profile of Local Suppliers Surveyed by the Author

Types of Suppliers	Names	Ownership	Year of Establishment	Year of starting production of motorcycle parts for assembly	Types of Parts	Major Customers of Motorcycle parts	Other products	Turnover (Bil. VND)	Share of motorcycle parts in Total Turnover	Number of Employees
First-tier Suppliers to Japanese Lead Firms	PA	state	1960	1994	Kickstarters, gears, etc.	J, L	household stainless steel	74	86%	743
	PB	state	1968	1999	Sprockets	J	parts for agricultural machinery and	66	53%	750
	PC	state	1969	1998	Mufflers, Frames, etc.	J, J(P)	various stainless steel products (household and industrial)	205	46%	1800
	PD	state	1972	1997	Plastic Injection Parts	J	household goods	30	40%	242
	PE	state	1974	n.a.	Chains	J, J(P)	bicycle parts, motorcycle aftermarket parts	96	88%	976
	PF	state	1989	1997	Volts, nuts	J	bicycle parts, parts for furniture	55	15%	262
Second-Tier Suppliers to Japanese Lead Firms	PG	private	1986	2001	Components for Brakes	L, J(P)	bicycle parts, motorcycle aftermarket parts	n.a.	80%	320
	PH	private	1988	2000	Plating (various types of parts)	L, T(P)	parts for electric appliances	24	n.a.	200
	PI	state	1995	2002	Electric Parts	L, T(P)	bicycle parts	19	47%	185
Suppliers to Local Assemblers	PJ	state	1974	2000	Handles etc.	L	bearings	30	13%	385
	PK	state	1977	2002	Pistons, etc,	L	parts for agricultural machinery	17	16%	244
	PL	private	1987	1999	Cylinders, Piston Rings, Valves, etc.	L	aftermarket parts	58	60%	280

(Notes) "State-owned enterprises" includes those that have already been equitized (transformed into joint stock companies).
(Source) 1) Survey commissioned to Vietnam Institute of Economics, Vietnam Academy of Social Science by the Institute of Developing Economies in 2004.
2) Author's interviews in Aug.-Sep 2004 and July-Aug. 2005.

5.2 First-tier suppliers of Japanese lead firms

Despite the small number of local firms that fall under this category, these firms do stand out in terms of turnover and the scale of production (see Table 6) as well as the extent of upgrading (to be discussed below). With regard to the development path, all six firms surveyed had had previous manufacturing experience mainly in metal

processing before they started to produce motorcycle parts, and all five of the firms that provided information replied that they became first-tier suppliers of Japanese lead firms prior to the "China shock." The success of these firms is closely associated with the fact that all six of the sample firms are state-owned, large-scale, and have a relatively long history, characteristics which – put in the context of Vietnam – imply that these firms were equipped with a large pool of human resources with a basic knowledge of production technology, and that they were in a relatively advantaged position to mobilise capital for investment.

If we focus on the relationship between local suppliers and the Japanese lead firms, we can see that the lead firms exerted substantial control over the suppliers. The lead firms set the parameters for transactions, in the sense that local suppliers were expected to manufacture the parts exactly to the orders and specifications provided by the lead firm, fulfilling the required QCD levels[27]. Since the local suppliers lacked the experience of producing motorcycle parts to strict QCD standards, the lead firms offered assistance in terms of production and production management technology (but no financial assistance), often sending their engineers from Japan, especially during the initial phase. The lead firms constantly monitored the QCD levels of suppliers and provided assistance when necessary. In turn, the suppliers were expected to show a long-term commitment to fulfil the expectations of the lead firms. The fact that three out of the five suppliers surveyed sell motorcycle parts only to foreign lead firms and not to local assemblers should be interpreted as an indication of their commitment.

However, broadening the focus to the suppliers' business as a whole, a somewhat different picture emerges. All the suppliers maintained production of their traditional products other than motorcycle parts, though the degree of dependence on the lead firms varied: the share of motorcycle parts in the firms' total sales ranged between 15% and 88%. Some have even started to diversify their products and customers outside the motorcycle industry (to be discussed below). Overall, the lead firm-supplier relationship in Vietnam was only emerging and has not deepened to the extent of Thailand and Indonesia. In Indonesia, the lead firm-supplier relationship has deepened to the extent that roughly 50% of the local suppliers to Japanese lead firms surveyed owe 60-80% of

[27] Based on the author's interview with Honda Vietnam in September 2004.

their sales to their single largest customers, with which they have more than 10 years of transactions (Sato 2006: 294-295).

The local suppliers experienced different types of upgrading within the Japanese chains. The type that was most commonly observed among the surveyed firms was renewal and improvement of production processes that enabled mass production of specific parts to meet the high QCD levels required by the lead firms. This was often achieved by concentrating investments and efforts into specific types of parts and production processes. In most surveyed firms, such specialization was a drastic shift away from the closed and integrated production system whereby individual firms undertook various production processes within their factories and the dispersed product structure whereby individual firms produced varieties of products in small quantities – features typical of state-owned enterprises in Vietnam. For instance, whereas PB had been engaged in the production of a variety of machinery parts including aluminum and steel parts, MA's decision to order sprockets from PB caused the firm to concentrate its investment and other resources in the steel stamping processes so as to reach the QCD levels required by MA. In 2003, the production of sprockets reached 1.24 million units. As PB successfully increased production of sprockets with required QCD levels, MA started to order other types of steel-made parts.

In terms of other types of upgrading, the results were mixed. PA and PC acquired production-related functions beyond simple production of parts, e,g, manufacturing molds, jigs, and/or tools, though none of the surveyed firms showed any sign of acquiring design functions within the Japanese chain[28]. Some surveyed firms diversified the types of motorcycle parts produced or diversified their own products beyond motorcycle parts, which appears to be largely the result of active strategies pursued by individual firms. For instance, by 2005, PC started to supply home-furnishing products made of stainless steel to a large European buyer, while it also tried to boost the sales of its traditional products, i.e. stainless steel kitchenware, in the local market by introducing new products. On the other hand, although PB maintains parts for agricultural machinery and diesel engines as its traditional products, no particular

[28] Higashi (2006) and Sato (2006) also present similar findings with regard to Thailand and Indonesia, respectively, where the relationship between local suppliers and Japanese lead firms has evolved over three to four decades.

attempt to strengthen this line of business was observed. The highest priority of the firm was on boosting the relationship with Japanese lead firms.

5.3 Second-tier suppliers to Japanese lead firms

The second-tier suppliers of Japanese lead firms include a larger number of local firms. Though a precise figure is unavailable, Table 5 shows there were more than 100 local second-tier suppliers under just six foreign first-tier suppliers surveyed. The author's survey of sample firms reveals several characteristics. First, in contrast to the first-tier suppliers, most of the second-tier suppliers were small- and medium-scale local firms, both state-owned and private, that were usually located near the first-tier suppliers. Second, most of the second-tier suppliers were previously producers of aftermarket parts[29], bicycle parts, and parts for various kinds of machinery, and started production of motorcycle parts for assembly after the "China shock." Third, all of the sample firms were also suppliers to local assemblers. In other words, these firms managed to be incorporated into the Japanese chains as second-tier suppliers after accumulating experience as suppliers for local assemblers.

The second-tier suppliers were usually under the control of first-tier suppliers with no direct relationship with the lead firms, with the exception of PH. While PH was engaged in plating processes for parts produced by a Taiwanese first-tier supplier, PH also received direct assistance from the Japanese lead firm for which the Taiwanese first-tier supplier supplied parts. While the relationship between the second-tier supplier and the first-tier supplier (or the lead firm, in the case of PH) was characterised by acute power asymmetry similar to the case of first-tier suppliers discussed above. However, the degree of control exerted by the first-tier supplier was relatively weaker than in the relationship between the lead firm and the first-tier supplier, reflecting the differences in available resources and experience in monitoring, evaluating, and assisting upgrading of the suppliers[30]. Though there were variations among second-tier suppliers, monitoring

[29] Even before the "China shock," Vietnam had numerous local firms producing aftermarket parts (or replacement parts) mainly for second-hand Honda motorcycles. According to the author's interview with industrial specialists, these firms emerged and developed from the early 1990s onwards.

[30] Since the headquarters of Japanese lead firm MA attached strategic importance to local supplier

by the first-tier supplier was generally not as strict or systematic, and assistance was provided but not as frequent or generous as in the case of Japanese lead firms discussed above. Unlike the first-tier suppliers, the second-tier suppliers generally maintained their transactions with local assemblers, with the exception of PH (Table 5).

Similar to the first-tier suppliers, second-tier suppliers achieved mass production by specialization in particular types of parts and/or particular production processes with required QCD levels. PG had previously undertaken both die-casting and machining processes for bicycle parts within their factory, but the Japanese first-tier supplier only subcontracted machining process to PG. In turn, PG concentrated its resources in improving the machining line to achieve the required QCD levels under the supervision and assistance of the first-tier supplier. Yet, the scale of production and the level of precision achieved remained modest compared to the first-tier suppliers discussed above.

Again, the results were mixed regarding other types of upgrading. The surveyed firms showed no particular signs of diversification into other functions beyond production. PH diversified both the types of motorcycle parts they supply and their customers by starting to undertake the plating of electric and electronic parts for Japanese firms. However, this upgrading seems to be the result of firm-specific circumstances and efforts, i.e., the monitoring and assistance the firm directly received from the Japanese lead firm and its active efforts in meeting the required QCD levels by hiring a part-time Japanese technical advisor. The results suggest that upgrading is not automatic.

5.4 Suppliers to local assemblers

The majority of local firms producing motorcycle parts fell under this category. As Table 6 shows, this category includes firms that are state-owned and private, old and new, and of different sizes. Most of these firms were previously engaged in the

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development at the sites of its global operations, its subsidiary in Vietnam was able to exploit a pool of engineers experienced in evaluating, monitoring and training the local suppliers based in Japan or Vietnam. On the other hand, foreign parts suppliers usually had to assist the second-tier suppliers with
their limited manpower and resources in Vietnam.

production of bicycle parts, aftermarket parts for motorcycles, or parts for other machinery (e.g., agricultural machinery), and became suppliers to local assemblers after the "China shock."

Table 7 What Lead Firms supply to suppliers when order is placed

Supplier	Lead firm/ Assembler	Items supplied by lead firm when order is placed		
		Sample	Drawing	Mold
PB	Japanese	X	X	-
	Taiwanese	X	X	-
	Japanese	X	X	-
PC	Japanese	X	X	-
	Japanese (parts)	X	X	-
PF	Japanese	X	X	-
	Local	X	X	-
	Local	X	X	-
PJ	Local	X	-	-
	Local	X	-	-
	Local	X	-	-
PK	Local	X	-	-
	Local	X	-	X
	Local	X	-	-

(Source) Author's survey.

The lead firm-supplier relationship within the local Chinese chains is largely market-based, which involves on-the-spot transactions whereby the suppliers basically produce as they receive an order. This is explained by the fact that the parts used by local assemblers are standardised to the extent that they are based on the same base model[31], and also the lack of both the capabilities and the means among the local assemblers to monitor the suppliers and assist in their upgrading efforts. As Table 7 shows, local assemblers largely make orders by just providing the samples without detailed specifications or drawings. Also, very few local assemblers provide support to local suppliers for their long-term upgrading. A local assembler, which has transactions with PL, remarked that when they examine the quality of the parts and find it to be unsatisfactory, they frequently switch suppliers rather than assist the current ones in improving the quality of their products. This type of governance makes it difficult for local suppliers to achieve any upgrading. Even in the limited case of assembler-supplier

[31] The majority of the models produced by local assemblers in Vietnam are products based on Honda's C100 (commonly known as "Supercub").

collaboration, they tend to face difficulties due to the insufficient capacities of the assemblers to assist the suppliers as well as the suppliers themselves. For instance, the local assembler discussed above once attempted to produce crankshafts in collaboration with a local supplier. However, the assembler eventually decided to give up the attempt because of the inability of the local supplier to achieve the required precision and quality, and instead came to depend on crankshafts imported from China.

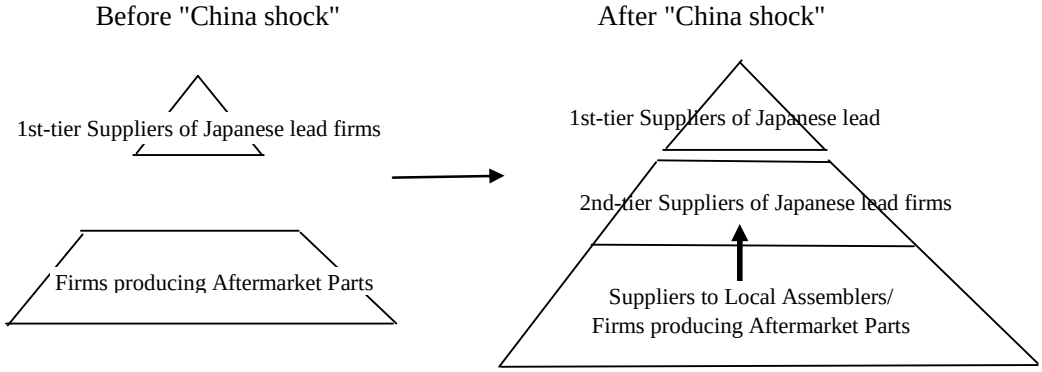
More fundamentally, all of the surveyed firms experienced a temporary surge in production volume during the years 1999-2001, but a sudden drop after 2002, mainly for two reasons. First, the orders from local assemblers started to decrease as they started to lose their market shares. Second, competition intensified: after the local content policy was abandoned and the tariffs on motorcycle parts were reduced in 2003, the imports of motorcycle parts, especially from China, started to increase, and some Chinese firms even set up subsidiaries in Vietnam to supply motorcycle parts for Lifan, a Chinese motorcycle firms that invested in Vietnam in 2002, and local assemblers. In the case of PL, turnover decreased by 44% between 2002 and 2005; during the same period the share of motorcycle parts for assembly in total turnover decreased from 60% to 20%, while the share of aftermarket parts, their traditional products, increased from 40% to 80%. In PK, too, the product structure has become more or less like the situation before the “China shock”, with machinery parts accounting for a significant bulk of the share.

5.5 Summing up: development and upgrading patterns of local suppliers

Let us summarize the findings of the analysis in this section. First, how did the transformation value chains discussed in the previous section affect the development trajectories of local suppliers? Figure 7 illustrates the transformation of the local motorcycle parts manufacturing sector. Prior to the China shock, there was a clear divide between a handful of local firms that had sufficient resources and capabilities to be incorporated into the Japanese value chain and the great majority of local firms producing aftermarket parts. The “China shock,” by creating a huge demand for standardised motorcycle parts without stringent QCD requirements, prompted the local firms previously producing aftermarket parts, as well as firms engaged in related

industries, to enter into the production of motorcycle parts and to become suppliers to local assemblers. Eventually, some of these suppliers in the local Chinese chains were incorporated into the Japanese chains as second-tier suppliers. This suggests that local Chinese chains, due the ease of entry, played a crucial role in mobilising and nurturing small-scale local firms at a relatively early stage of development. Since only a few years had passed since the “China shock” at the time of the survey, it still remains to be seen whether some of the second-tier suppliers can eventually shift their position within the Japanese chains to become first-tier suppliers themselves.

Figure 7 Transformation of Local Parts Manufacturing Firms



(Source) Prepared by the author.

Second, what types of upgrading were achieved by different types of local suppliers? Our preliminary analysis shows that, in local Chinese chains, local suppliers and local assemblers were engaged in a market-based relationship, where the local assemblers lacked the capacity to monitor and assist the local suppliers. The local suppliers faced difficulties in achieving any upgrading. On the other hand, in Japanese chains, the Japanese lead firms exercised substantial control and supervision over local suppliers. Many of the local suppliers participating in Japanese chains achieved upgrading, but the types and extent of upgrading varied. While many local suppliers incorporated into the Japanese chains experienced renewal and improvement of production processes that enabled mass production in accordance with the required QCD levels, which would be best categorised as “process upgrading” (Schmitz and Humphrey 2004), a divergence in the degree of upgrading was observed. Trajectories for other types of upgrading (diversification into other functions, diversification of

products, and diversification into other sectors) also differed substantially across firms. The firm's position in the value chain, active strategies and efforts by the firm, the degree of monitoring and assistance by the leading firm were cited as some of the likely factors that might explain the variations in upgrading across firms.

6. Conclusions

This paper argues that China's rise might bring about a far-reaching impact on developing countries – much beyond what a simple analysis of trade suggests. A detailed examination on how the advancement of Chinese firms abroad, which can take different modes, affects local firms in developing countries sheds light on an extremely important aspect of changes taking place within developing countries that are inevitably abstracted in an analysis of trade data. The key factors that need to be examined in detail include: the modes of engagement by Chinese firms in the host economy, the relationship between Chinese firms and local firms in the host economy, the capabilities and strategies of the local firms, and the general business environment that affects the viabilities of these strategies, including government policy.

In the case of Vietnam's motorcycle industry, what seemed to be a temporary surge of imports from China produced a complex set of changes in the value chains and local firms. To start with, the creation of "Chinese motorcycles" was clearly a breakthrough for the whole industry, in the sense that the use of a well-established base model and standardised parts enabled substantial cost reduction, far beyond the imagination of the Japanese lead firms until the mid-1990s. Following the GVC approach, we can conclude that China's rise has affected the development of local firms in Vietnam via two channels. First, China's rise, by introducing these "Chinese motorcycles" to the Vietnamese market and providing basic technology for production of their parts and components, encouraged entry of local firms into assembly, production of components and parts, and distribution of motorcycles. Once the local firms had entered, endogenous changes were set in motion, as the "Chinese motorcycles" started to evolve gradually into Vietnamese motorcycles. While the entry of local firms in the context of this specific case study was at least partly a result of government regulations such as

import barriers and local content requirements, the experience of Vietnam's motorcycle industry does suggest some of the areas where local firms can play their roles, such as the production of relatively simple parts and components and the distribution of the products in the local market. The second channel of changes was transformation of the existing Japanese chains, as China's rise put an enormous competitive pressure on the Japanese lead firms. In effect, this transformation opened a way for some of the local suppliers to enter into the Japanese chains as second-tier suppliers.

Finally, on the basis of the analysis of Vietnam's motorcycle industry we would like to draw a few implications on the GVC approach and discuss some areas for further research. First, "producing for local market" (as opposed to "producing for global market" via global buyers) matters. Precisely because the motorcycle industry targeted local markets in developing countries, the Japanese lead firms transferred much of the value chain activities to countries with large market. This basically means larger space for local firms to participate in value chains governed by global lead firms. Furthermore, in local markets in developing countries, local lead firms perhaps have a much better chance of emerging and competing on a par with global lead firms, given the local firms' advantage in grasping the local market needs, producing price-competitive products, and having a better hold of local distribution channels. Further research is needed to examine the conditions under which local lead firms emerge, their development path and the constraints they face in the course of development, as well as the roles they play in the development of local suppliers.

Second, value chains may evolve over time; e.g., new chains may emerge, and existing chains may be transformed. Local firms may move from one chain to another, or be incorporated simultaneously into different chains. While the previous research has largely centred around the structure and governance of value chains and their implications for local firms, the dynamic process of the evolution of value chains suggested by this paper points to the importance of placing "local firms" at the centre of analysis. In latecomer developing countries that do not have a readily available pool of local firms with sufficient capacities to become suppliers to global buyers, how do local firms emerge and evolve over time? What are the roles played by different types of value chains at different stages of the firms' development? Further research into the dynamic process of local firms' development and learning would be required to shed

light on these important issues.

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