JAPANESE INVESTMENT AND AID STRATEGIES IN VIETNAM: IMPLICATIONS FOR DEVELOPMENT DIRECTIONS

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JAPANESE PRODUCERS AND THE STRATEGIC DEVELOPMENT OF VIETNAM'S AUTOMOBILE INDUSTRY

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Introduction

To assess the Japanese auto industry's potential role as an investor in Vietnam and as a model for auto industry development, the paper first summarizes the evolution of Japan's industry. Based on this, it assesses the industry's potential impact on Vietnam's auto sector over the next few years, depending on government policies, and its ability to benefit from the desire of Japanese firms to expand into emerging growth markets. The intent is to understand factors influencing these producers' cross-border production investments (FDI), global-sourcing programs, and international marketing strategies, and how Vietnam can best participate in these to achieve its development objectives. The analysis builds on explanations of Japanese multinational corporations' (MNCs) decision-making as an evolutionary, rule-based system, reflecting their managers' postwar experience with product cycles, constant cost improvement, and growth in global market share. It examines how these developments have contributed to their global growth in autos, how they have changed car manufacturing, and how their approach to foreign markets contrasts with US and European firms. It then notes how these factors have interacted with alternative policy approaches to developing an auto sector, including trade agreements like NAFTA (North American Free Trade Agreement) and the strategies of individual countries like Canada and Mexico. Finally, it relates these considerations to Vietnam's development of internationally competitive manufacturing and the reduction in the exchange cost of importing transport equipment.

The foreign direct investment (FDI) of Japanese auto firms is determined by their administrative heritage and strategic motivation, which reflect the interaction of product cycles, expectations of continuous cost improvement, and each producer's development. These factors are important to Japanese managers based on their experiences, and thus offer a better explanation of their FDI, and global sourcing and marketing strategies in which growth in global market share is emphasized as a strategic objective. They also explain their more centralized and globally integrated approach to foreign manufacturing compared to the decentralized multidomestic approach of US firms. These different organizational and decision patterns have implications for auto sector development in host countries like Vietnam.

Japanese producers' FDI has developed quickly over the last 15 years, the speed reflecting the industry's rapid economic and competitive evolution since World War II. Once the domestic market became saturated, they began
to export, and having established overseas markets, they began to invest in order to service customers better, hedge exchange risks, and extend sales opportunities. Thus Toyota's and Honda's US investments were undertaken to hedge exchange exposures and to protect a large market they were successfully supplying via exports. In Asia, though, they are motivated primarily by market growth, cost control, and strategic defence. They have been trailed by other Japanese firms who seem propelled by a strong "follow-the-leader" compulsion. These investment strategies are not, however, an extension of a new product development such as that pursued by Ford early in this century.

The Pattern of Competition in Japan

To understand these situations, one must appreciate that Japanese auto MNCs' decisions, with respect to FDI, have been influenced by their evolution from import substitution. Their FDI and overseas management thus reflect a concern to protect global market share and maintain low cost production, ensuring firm survival. It is not to extend profit opportunities for new technologies. Typical of most large, successful Japanese manufacturing firms, auto producers developed initially by importing products and technology, producing for the local market, and improving the product and process, then by exporting, first to LDCs (Less Developed Countries) and then to more advanced ones. This development was supported by rapid investment and aggressive pricing to build volume and market share over an extended period. Establishing product differentiation in a market served by similar producers using similar technologies was difficult. Indeed, the Ministry of International Trade and Industry (MITI) licensing policies precluded such technology-based monopolies, leading to an emphasis on developing superior process technologies, sales growth, and constant cost reductions. Among successful firms, rapid investment ahead of demand was a key strategic element.\(^5\) Downward price pressures were constant, particularly once domestic market growth slowed, forcing firms to export. Each firm had an incentive to increase are to keep plants operating at capacity.

Despite such price pressures, Japanese auto firms usually offer a full product range. Firms are able to keep the costs of their expanded lines under control because most are primarily assemblers, less integrated than their US counterparts. As many use the same subcontractors, concentration among subcontractors tends to occur. Toyota has larger volume and lower costs than Mazda, and more power vis-à-vis parts' producers. But by buying from the same subcontractors, Mazda can ride the coattails of Toyota's scale and efficiency. Toyota benefits from the added volume to its subcontractors.\(^6\) In addition, the development of lean manufacturing has substantially reduced the extra cost of assembling several models.\(^7\)

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The Paradigm

With this background, the competitive paradigm for Japanese auto producers can be stated as:

- Japanese auto firms often offer products to protect and maintain existing client relationships and market share. This is more important than profits. They consciously use existing business to cross-subsidize this. Profits from core activities in oligopolistic markets where a firm has pricing power or low costs are used to subsidize new or peripheral activities, even pricing below cost. Competition in peripheral products or markets is therefore severe except for efficient producers.

- This pattern of competitive interaction is where a firm generates profits in a few product/market segments plus many ancillary products, markets, and services encircling the customer, but where the firm breaks even or loses money. The return to the firm from operations may be similar to Western counterparts trying to equalize returns across businesses. The competitive behaviour and allocation of resources, though, are different. There is a disproportionate allocation of resources to core segments, whereas peripheral businesses are run as "service." Market share in the core segments is substantial by minimal in peripheral areas, which may be sourced from neutral suppliers. Customers and market share are defended fiercely, given the company's commitment to core businesses combined with its drive for firm survival. Nevertheless, by such tactics it keeps pressure on competitors' cash flow.

Strategic Motivations

Given these experiences and considerations, the pressures currently affecting Japanese automobile managers' global long-term decisions are as follows.

- Maintaining corporate existence is critical to top executives' survival and benefits. As well, lifelong commitment to the firm, customers, employees, suppliers, banks, etc., requires this, while alternative employment is limited. To ensure this goal, the company must protect against continuous yen appreciation and shifts in cost competitiveness toward the NICs (Newly Industrialized Countries), as well as offset persistent US protectionist pressures to reduce the trade deficit.

- Constantly upgrading auto industry-related technologies, including electronics, will be necessary due to competitive pressures combined with customer demands. Because producers face similar external environments, and managers have like backgrounds, competitive
compulsion will force most companies to follow the leading firms, Toyota and Honda. This may result in overcapacity and "excessive competition" in the US and Europe\(^9\) or even in some NICs and LDCs.

- To achieve these objectives, technology transfers to the NICs and LDCs must be managed, if possible, via affiliates and suppliers. The NICs will try to emulate Japan by developing global competitors who will evolve with the product cycle, for example, Korea.

- While the Japanese market is saturated, it is large and it is important to control for cash flow and to introduce innovations due to demanding consumers. To maintain position will require a combination of attention to customers and cost control via sourcing parts and vehicles from abroad on an integrated basis. Having a global presence is thus necessary to maintain competitiveness in Japan and overseas. Therefore, growing market share remains important. To be globally competitive, Japanese firms must be in the large advanced markets as well as the growth markets in Asia and Latin America. FDI is key to this corporate strategy.

- The firms should be able to pursue their strategies with little domestic political interference because the government has no clear economic goals and has been hurt by scandals. However, since this means firms may take a more active role in negotiations with foreign governments, those governments should develop negotiating strategies to deal with them directly.

Given these pressures, Japanese auto MNCs have developed strategic routines to manage the product cycle within which FDI, offshore sourcing, and new market development are increasingly important. Becoming global and transnational\(^{10}\) is part of a system to create and maintain advantage to ensure corporate existence. For instance, by investing in US production and then exporting, they have made US producers and themselves less vulnerable to competition from NICs. Further, as they have produced higher quality cars and auto parts abroad, they have learned to establish production outside Japan, while building scale, improving quality, and reducing costs through exports as well as local sales.

To appreciate the motivations behind this, one should recognize the role that classic product cycles have played in Japan's industrial development, especially within the auto sector. Historically, as noted above, Japanese firms, including auto producers, have mostly been followers and imitators. After first producing and exporting simple manufactures and primary commodities, growth and development then improved technical production capabilities and
generated demand for more advanced products, which had first been developed abroad. Since more advanced industries were generally more capital intensive, growth and capital accumulation shifted the factors of production appropriately as part of economic development.

The Place of FDI in the Product Cycle

After products were imported from more advanced countries and domestic demand developed, the industry grew and began to export once the local market was saturated and producers became more efficient. Japan was assisted in this because firms in advanced countries became less competitive in such industries as their economies grew, capital increased, and wages rose. Once a new technology was known, transfer costs declined, aiding Japanese firms. Having become globally competitive, they exported first to LDCs who were not producing, where markets were price sensitive and where competition from advanced countries was similar. After building export experience and further lowering costs and increasing quality, the industry began exporting to the advanced countries, whose markets were generally mature. Because so many products were commodities produced in high volume, price competition was a good entry strategy given reasonable quality and service. As Japan evolved, its own labour intensive, lower value-added industries became subject to similar competitive pressures from followers like Korea. This may be seen in the development of the Korean or Thai auto industries.

Given this industrial and trade development, Japan's auto managers saw markets build via imports from advanced countries. Then came rapid domestic market growth and production, exports to the LDCs, exports to more advanced markets, and finally imports from LDCs. FDI emerged either during the later export stage to the advanced countries or as part of imports from the LDCs where those producers are often Japanese owned. FDI in Asia has now extended this concept further as firms seek to capture the growth in these markets while controlling the evolution of new competitors.

The import-substitution stage is the high growth period, as now seen for autos in Thailand, China, Indonesia, Malaysia, the Philippines, and potentially Vietnam. By the initial export stage, domestic growth is decreasing, motivating firms to export, as currently witnessed in Korea. By the later export stage, Japanese and advanced country demand is mature, so gains in market share are a zero sum game, though exports become a larger part of production. This means increased Japanese or recently Korean exports have frequently led to political pressures from affected countries like the United States, stimulating FDI to leap protectionist barriers to preserve markets. Japanese FDI, though, has come at a later stage in the cycle than for US producers who want to capture markets for their innovations. For the Japanese
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and Koreans, the markets exist and the products are not new. For autos, this evolutionary sequence took about 35 years. Currently Japanese auto producers are in the advanced production and export stage; FDI is an integral part of the leading producers' overall strategies, including vehicle and parts imports from Japanese-owned plants abroad as well as local sales and exports to third countries from those plants.

Auto managers are aware of the cost reductions generated by high growth, market expansion, and the introduction of new technologies through rapid investment, including their FDI. This pattern for developing export-led industries was already clear for autos by the 1970s. It then was adopted by Korea and Taiwan, again achieving high growth and cost reductions. This reinforced the evolutionary, export-led growth model's visibility and acceptance. However, in managing this process, a divergence emerged between Japanese auto firms' intra-industry goals to maintain existence and global competitiveness and the government's inter-industry development goals. This was particularly true for automobiles after the "oil shock." In turn, Japanese auto FDI increased in the 1980s and 1990s as firms resisted policies to phase them out in Japan, since auto managers did not accept competitive shifts as inevitable when they had adverse firm results.

They could not easily move production factors (e.g., capital and labour) from producing cars to producing computers or from Japan to an offshore location. Industry-specific tacit skills and sophisticated production processes were the foundations of their competitive success. So they pursued a mixed strategy combining resistance, acceptance, and pursuit of shifting competitive advantage while generally remaining in autos. It was not possible to sell or scrap major assets or to dismiss their labour forces. This contrasted with their US and European counterparts who did downsize or acquire new businesses and, through the political process, sought and received protection in response to similar competitive developments.

The FDI strategy of the US, European, and especially Japanese firms has had the effect, though, of frustrating development of new competitors in the host countries while keeping support, sales, and managerial people employed at home. This new development showed FDI was an extension of the product cycle that was reflected in increased imports from LDCs but produced in plants owned by the importers. While Honda began this in the early 1980s, many more Japanese auto companies followed after the 1985 yen revaluation and the auto VRAs (Voluntary Restraint Agreements). They also made large gains in manufacturing productivity due to massive investments.

Yet, the Japanese producers' approach to FDI was different than foreign competitors in several respects. First, they tried to replicate their
production advantages and transfer their tacit production skills, parts' supply structure, and corporate culture to the foreign environment.\textsuperscript{19} This was a major management challenge, but indicated their understanding of their competitive advantage. Further, they were familiar with the bad experiences of Volkswagen and Renault in their attempts to produce in the US via a greenfields plant or acquiring an existing facility. The US success of Toyota, Honda, and Nissan, in turn, stimulated investment by Mazda, Mitsubishi, and Isuzu/Fuji as well as expansion to the UK and other countries. That is, having once learned it could be done and how to do it, they developed techniques to replicate this elsewhere, including Asia. In addition, as exports had traditionally been a tool to expand market share and achieve economies of experience, they became part of their FDI strategy with US and Canadian plants exporting to Europe and Japan, and UK plants exporting to Europe. Similarly, as one way to reduce production costs was to achieve scale and productivity improvements in parts,\textsuperscript{20} the new plants of captive suppliers were encouraged to pursue sales with GM, Ford, and Chrysler, again following Japanese corporate behaviour.

The potential to upgrade or expand an existing product line through research and development (R&D) and technical change or through intra-industry development has also been an aspect of product cycles.\textsuperscript{21} For autos, this was manifested by developing luxury, high-technology autos like the Lexus and Acura. That is, as Japanese firms advanced through the intra-industry stages and used the pool of existing foreign technology, they ceased to be followers and became innovators. By the mid-1970s, Baba argues the fast imitators had become more innovative while the innovators had become more cost oriented.\textsuperscript{22} Those who could not make this shift fell behind and became vulnerable to foreign or domestic acquisition as in GM-Isuzu and Nissan-Fuji Heavy.

However, the leading firms differed from their Western counterparts by not abandoning production of simpler technological products, like the Corolla. Rather, as part of their strategic behaviour, their FDI strategy was to move older, more price-sensitive products offshore while producing newer, more advanced, higher margin products at home. In this manner, intra-industry cycles in autos have affected FDI by impacting the motivations behind particular offshore investments. While inter-industry evolution can stimulate FDI to acquire new technologies for introduction into Japan in more advanced cars, such as the use of microprocessors for engine and suspension control, intra-industry evolution will stimulate investment to protect global market share. This approach has meant that not only did auto firms not relinquish any sales and earnings, but they also denied potential competitors from the NICs a production platform in the simpler, lower-end auto market from which
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to enter the industry and do to them what they had done to the US. This is a major motivating factor for the producers in developing their global strategies.

Therefore, global FDI, sourcing, and marketing patterns are complex, but in each case the motivations can be understood. Some FDI has been in offshore assembly operations in order to leap various barriers such as the US and Europe, and some in Latin America and Asia to capture growth. As political pressures have grown and the yen has appreciated, the plants in Europe and the US have also been used as export platforms to other countries, including Japan. For Toyota and Honda, this has had the benefit of maintaining or increasing share in Japan, lowering transportation costs through round-tripping car carriers, and improving US scale and plant efficiency without politically arousing US competitors.

Similarly, FDIs in the NICs and LDCs were initially made to source lower-cost parts for assembly in Japan and elsewhere to remain competitive in products previously supplied from Japan. Japanese firms then extended this to assembly to supply local markets, recognizing their long-term growth potential. They have also made use of existing FDI capabilities on a more integrated basis, as in Toyota's sourcing strategy within ASEAN (Association of Southeast Asian Nations). Intra-industry FDI and global integration to achieve a continuous cost advantage seem to dominate their corporate behaviour. As noted in Automotive News with respect to Thailand: "This is a matter of world strategy for the Japanese automakers. The US and European strategies have been completed and now comes Asia as a third step."

This managerial behaviour is expected in Nelson and Winter's theory, since firms normally innovate close to their experience. As initial FDI is a new activity, firms will keep to existing areas of expertise to reduce the number of new variables. So for their major FDI, for example, Toyota's in Georgetown or Honda's in Marysville, they tried to replicate the established culture and supply structure using a well-known car with a long production history like the Accord or Corolla. In the case of new technologies, such as luxury cars, they are usually introduced first in Japan, again limiting the unknown variables and following the well-known pattern of product development.

Because of FDI responses by various auto MNCs to competitive change in the product cycle (PC), several observers have modified the classic product cycle to include FDI. Therefore, the evolutionary cycle described above for autos should be differentiated from the classic PC as a "modified product cycle." While the modified PC is not applicable to all industries—for instance, FDI played no role in the cotton textile industry—in industries like computers and autos, FDI has had a major role. This is clear in the way it is being used
by Japan’s auto industry as a tool to sustain global competitiveness. Therefore, for autos, the modified cycle is an important analytic approach.

This modified cycle highlights a critical difference (relative to Western competitors) in the response of Japanese producers to economic forces that shift the comparative advantage in autos to other countries. Though the producers recognize they cannot eliminate such shifts in comparative advantage to other production sites, they are still actively managing the process. This has important implications for firms and countries influenced by the auto industry. That is, while influences shifting competitive advantage due to economic growth are evident for autos, the ability of the leading Japanese auto producers to manage the process and maintain global competitiveness is distinctive. If it persists, they will continue to concentrate on core businesses, that is, they will not diversify out of autos, trucks, and motorcycles, they will pursue global growth, and they will maintain or increase global competitiveness through constant cost improvement. As a recent *New York Times* article noted: "Despite the recession in Japan, auto parts manufacturers there are improving their quality and productivity faster than their competitors in North America, according to a study of 71 component plants in nine countries. . . . While the Japanese parts makers surveyed increased their productivity by almost 38% from 1992 to 1994, the American companies made gains only in the mid-20’s. . . . On average, the plants in Japan were 18% more productive than ones in the United States and 35% more productive than ones in Europe. . . . In the survey, the 13 best plants had a 2-to-1 edge over their competitors in productivity and inventory control, and up to a 170-to-1 advantage in quality. Of these 13 best plants five were in Japan, three in France, and three in the United States, one of which was owned by a Japanese company. Two were in Spain. The other countries surveyed—Britain, Germany, and Italy—had none."30 Since parts account for about 75 percent of a car’s value,30 this translates into significant continuing cost and competitive benefits for Japanese makers globally. This impact on corporate competitiveness is thus important and explains the influence of the International Product Cycle analysis on Japan’s auto manufacturers’ strategic thinking, competitive behaviour, and FDI. It also means the policies of the NICs and LDCs must account for this behaviour in their auto industry development plans.

**Corporate Value-added**

A key element in the FDI of Japanese firms is their managers’ stated confidence in continually reducing costs to become the low-cost producers, even overseas, or to reduce costs and improve the quality of acquired technologies for sale in Japan.31 Indeed, their ability to accomplish the former was a surprise to US auto and parts manufacturers who thought entry into the US
would provide a level playing field as they became subject to the same economics as Americans, in other words, a repeat of Volkswagen or Renault.

This pervasive attitude among Japanese managers comes from their administrative heritage and is rooted in their postwar experience where continual cost reductions were achieved over time.\textsuperscript{32} These reductions have been a function of scale economies, continued product development, improved workers' skills, improved organizational structures, more sophisticated equipment, high investment rates, etc. For this reason, market share has been a good predictor of profitability,\textsuperscript{33} and cost reductions have occurred rapidly in the early stages of product or technology introduction, when growth and accumulation rates are most rapid.\textsuperscript{34} However, managers have extended the concept of continuous improvement or \textit{kaizen}\textsuperscript{35} firm-wide, and to include production processes in any environment.

Since Japanese auto producers have now reached the innovation frontier for their main business, acquiring foreign technology to develop competitively and to grow is less viable. Once Japanese firms started exporting to other advanced countries, the domestic market was already fairly mature and companies were close to the innovation frontier.\textsuperscript{36} Consequently, there were fewer new technologies to be introduced. Further, foreign producers were well aware of their competitive presence and would not knowingly assist them. Japan's success in autos has been so spectacular that foreigners have projected this development to their product/market segment, even if it has not occurred. Indeed, fear of falling behind globally is partly behind the US and Europe's belated entry into high-growth Asian markets. In any case, their development stage combined with global competitive developments leaves Japanese auto MNCs little alternative but to pursue growth in new markets and to continue to invest in cost improvement strategies worldwide to increase global share. This might be termed "scale and share" as opposed to Chandler's "Scale and Scope."\textsuperscript{37}

An important aspect of this emphasis on share and cost reduction is these firms' experience with quality and cost improvement,\textsuperscript{38} since they believe continuous cost reduction and quality improvement are possible through constant advances in manufacturing and organization. In response to the current recession and an appreciating yen, as noted above, parts manufacturers have achieved a 38 percent cost improvement compared to 24 percent for US competitors.\textsuperscript{39} So, just as senior auto managers have experienced the product cycle, they have also seen rapid cost reduction and quality improvement due to high growth, new technology, and capacity additions. Their firms had to operate this way to remain competitive. It was during this process they discovered that cost and quality improvement moved together, not in opposite directions.
Better quality was then discovered to reduce costs too, as less inventories, repairs, unusable returns, service, and transportation costs were incurred, while customer satisfaction improved. This situation combined with improved quality and price competitiveness to increase market penetration, further reducing costs. Over time the companies then had the self-reinforcing and interactive benefits of high quality, low costs, and global competitiveness. Because of this administrative heritage, auto and auto parts managers are confident that they can achieve cost advantage in any location and use this to build share. This ensures the firm's long-term viability as well as the managers' employment and wages. Toyota and its production system are the most notable embodiment of this, but it has been emulated by others, like Mitsubishi and Mazda, under competitive pressure. Return on corporate capital does not seem to play a large role in these decisions, although Toyota, as a result of its policies and global manufacturing prowess, is extremely profitable and has the industry's strongest balance sheet.

In sum, managing under conditions of high growth and intense competition has made Japanese auto industry managers conscious of and responsive to cost management and international shifts in cost advantage to maintain firm competitiveness. This has led to the evolution of different routines to run their firms globally than has been typical of Western companies. These differences include those relating to FDI, marketing, and cost control. This is particularly true in strategies for growth markets that emphasize expanding and capturing share before they mature. There are thus essential differences in their senior managers' experiences and those of their Western counterparts that result in different approaches to FDI. The growth and development they have experienced have been very rapid but still evolutionary. They have developed from the successful introduction of established foreign technologies. Having no proprietary technologies or product innovation risk, they gained competitively from constant cost and product improvements that translated over time into global market share. Their approach to FDI is a direct extension of this and is an attempt to extend corporate growth to emerging markets as their traditional Triad (Europe, North America, and Japan) markets have matured. It is part of managing product cycles through continual cost improvement.

The result of this is incremental evolution and reliance on past experience, which now includes successful FDI management. Toyota, for instance, until the 1980s produced mostly in one location. Production had followed the product cycle from import substitution through export. Export growth was extremely successful, driving down costs and improving global and Japanese market share. However, a revalued yen, US VRA, and intense political pressure forced Japanese management to realize a US investment was necessary and inevitable. But their response was ordered. First, they
established that their existing production routines worked in the US by forming a joint venture (JV) in an old GM plant, using primarily imported parts. This approach was low risk, involving little capital and no new commitments to suppliers.

Having adapted its assembly routines to the US, Toyota began reproducing its organizational supply and production structure in Kentucky, using some of the staff who had managed the Fremont, California, plant. This step, however, involved more capital as well as commitments to the suppliers it encouraged to invest. The investment, though, was staged with engine manufacture coming after the assembly plant was operating. The overall result, especially the movement of its main keiretsu (group of affiliated companies) suppliers to the US, reflected Toyota's history. They were part of the transfer of Toyota's kamban (demand pull) and just-in-time systems, demonstrating these could be replicated too. In addition, having developed managers capable of transferring Toyota's routines abroad, and having gained the organizational knowledge that it could be done, Toyota was prepared to make more FDIs, such as in the UK. Thus, Toyota's FDI has been an evolutionary process stemming from both the company's history and the management's perception that its competitive advantage lay in its organizational structure and production system. There was not any attempt to implement a local solution such as a US-style assembly plant using local parts' suppliers or the acquisition of an existing plant like Renault. Maintaining tacit knowledge played a critical role in determining Toyota's FDI approach. Toyota feels for FDI to be successful, they must replicate or adapt their routines abroad. FDI was a next step in managing the product cycle, and was undertaken to preserve an important market.

Thus the approach of Japanese producers to capturing growth and maintaining market share offshore in new markets follows the same pattern used to successfully penetrate and develop other markets. Corporate strategy in the Triad is to preserve market share, but in emerging markets, it is to gain share through rapid expansion in investment and the replication of established routines for transferring technology, training personnel, and developing supplier networks. This differs from US and European firms looking to capture a share of such markets for their existing automobiles primarily through low-volume assembly of knock-down kits, analogous to the routines established before World War II. Another key difference is that Japan's auto producers' replication routines have become components for related organizations, that is, for their long-term suppliers. The FDI by Japan's tire and steel companies is functionally related to the auto manufacturers' FDI strategies, again demonstrating that strategic routines including FDI are an extension of historical competitive development and success that then affects FDI and global competition. This development began with several auto
producers that were mostly imitators with access to equivalent technology. Competitive success thus depended on cost cutting through constant improvement. Further, because of intense competition, such improvements had to be passed to customers in lower prices. Monopoly rents from controlling supply were virtually impossible. In addition, the incentive to invent was low since more advanced technology could be acquired, while invention would be time consuming and costly. In this way, the auto firms grew rapidly and borrowed aggressively. Expansion capital was at a premium and funds for basic R&D compared to development were limited.

The most successful firms were naturally companies that cut costs best and priced similarly. This was achieved by growing, even ahead of market demand, because this lowered labour costs, supported more loans, and incorporated the latest technology into the production process. This investment in anticipation of growth helps explain the early positioning of these firms in Asia. Due to the many initial competitors, the domestic market saturated quickly, encouraging exports. But to develop export opportunities, price competition was important; it was necessary to be an effective cost cutter. If you were a good cost cutter, exports grew rapidly, so you domestic cost position improved too. Increasing domestic market share then made one more export competitive, and so on. Therefore, cost cutters emerged as industry leaders.44

This extended to their cost reduction strategies overseas and their incorporation into their FDI production and training processes.45 If you are a low-cost producer, you believe your global competitive success and corporate survival depend on its continuation and extension to all markets, since the low-cost producer worldwide will not be driven out of business. Other producers will wither first. But such weeding out reduces supply, stabilizes markets, and creates price pressures. Also, constant cost reduction may be more achievable than profit maximization because firms usually don't control market prices or demand, but they can manage some costs. Because this approach has worked well for Japanese auto firms, they will continue to use it as they enter markets. Successful new market entry, FDI, and cost-reduction routines have a strong inertia, which is why exports, FDI, and foreign markets are seen as keys to long-term corporate survival. Indeed, manufacturers who have not been successful exporters and global investors have not survived. In addition, if Japanese producers can use the same car carriers for exports from overseas locations that they use for imports, they can reduce per car transport costs given a round-trip rather than a one-way passage. This will lower delivery costs to all affected markets, improving cost position in all locations. The competitive importance of such global cost advantages rises as a lack of restraint and a drive for competitive survival combine with excess capacity to
stimulate a shakeout or additional consolidation and grouping. The experience of Japanese auto firms is that, in a shakeout, the low-cost producer wins.

However, not all firms have done this on a leadership basis. Another decision factor reflecting the continuation of some firms' administrative heritage is evidence that as leaders invested into new overseas manufacturing locations, most competitors followed. Though Toyota's FDI might be viewed as reducing the risk of foreign assembly for Mitsubishi, a more important motivation is "competitive compulsion." That is, Toyota's successful investment will hurt Mitsubishi because Toyota will increase market share, which will improve costs. More imported parts may lower costs due to production effects or may spread a new model's development cost over more units. Further, eventual exports from a given location could make them stronger. Finally, Mitsubishi faces the same import barriers and yen appreciation, which requires some managerial response. Since FDI is a possible response to reduce costs and be competitive, why not follow, since traditionally this involves little risk for managers making the decision. Alternatively, failure to invest represents an unknown and could be risky if Toyota succeeds.

The auto producers and their suppliers have also invested in the NICs (Newly Industrialized Countries). If this modern capacity frustrates local competitors, they may have prevented creation of a Korean Toyota, a Taiwanese Nippon Denso, or an Indian Suzuki. They have thus achieved Gilpin's modified product cycle development. More importantly, they have co-opted many of those countries' "advanced factors," that in Porter's vision provide the basis for an industry's long-term competitive advantage. If Japanese auto MNCs also succeed in translating their long-term employment routines to local subsidiaries or in limiting skill transfers to potential competitors because many are tacit and only useful within the corporate system, they will retain and build on the benefits of these advanced factors. This may be why countries like Korea and Malaysia constantly complain about not receiving the latest Japanese technologies. Yet this shows that these MNCs are consciously managing the product cycle based on their administrative heritage, using FDI as a tool.

Capturing these advanced factors not only helps the MNCs competitively by making it difficult for NIC competitors to develop, it also alleviates the shortage of Japanese technical personnel, a growing problem. This type of FDI creates an environment where firms no longer compete just for market share. Competition now extends to key global resources, especially for the advanced factors that are the basis for sustained advantage. Scientific personnel represent such resources and are an apparent objective of Japanese auto MNCs. The major firms' laboratories and design centres in the US
indicate this, as does the increasing number of worldwide patents that are
filed.

However, if Vietnam is to exploit these motivations, it needs to
understand how their development policies might be strategically integrated
into this system. Presently, Japanese companies are using the recession to
offer high-quality cars at a good price without reducing their commitment to
smaller cars, contrary to the behavior of US companies in the early 1970s
when low-priced Japanese compacts entered the US. In luxury autos, they
have repeated their routine of building experience in Japan, then entering the
price sensitive export markets where they can compete head to head, export
to export, that is, against the Europeans and US luxury imports. This uses
capacity that is being freed by FDI. In the regular car market, FDI is used to
build capacity across political and cost barriers to maintain and expand market
share. To achieve this result, they are extending their keiretsu and kamban
systems to the US, Europe, and ASEAN to achieve superior cost position. In
the US and Europe this potentially realizes Ohmae's65 concern about excess
capacity and an industry shakeout given two mature, slow-growth markets
with the Japanese as low-cost producers. However, they are helping to defuse
this somewhat by expanding production there through exports. A shakeout
may come in the US, however, if they introduce the computerized ordering
system they have in Japan. This may now be possible given a US production
base. If customers can order a car to their specifications as they can in Japan
with the expectation of a three-week delivery, the reduced cost of dealer
inventories (financing and space), year-end sales, and customer rebates are
significant. At the same time, customer satisfaction could increase, and dealer
networks could expand dramatically if a service station with a CRT and a few
demonstration models is a potential outlet.

Another element in this competitively beneficial, interactive industry
process is now emerging due to the increased use of electronics in automobiles.
Car stereos, car phones, car faxes, electronic maps, car TVs, electronic fuel
injection, climate controls, cruise controls, etc., confirm this. Many such
products are being developed in Japan, the location of the world's dominant
consumer electronics firms. Logically, Japanese car manufacturers are leaders
in introducing these features. The close relationship between these two sectors
and the worldwide presence of the electronics firms give the auto producers
another routine increasingly important to their global strategy. If these
strategic routines are successful, Japanese consumer electronics, steel, and
shipbuilding companies will do well too.

To achieve this strategic growth, the FDI and marketing decisions of
leading Japanese auto producers and their followers will not be governed by
debt or balance sheet considerations. This is because maintaining or increasing
global market share via aggressive investment and pricing strategies is viewed as key to retaining competitive position. This coincides with the recognition that Japanese competition in this industry is global, so defensive and offensive actions are necessary worldwide. Reliance on indirect finance and the main banking system overseas is likely to persist too, and such borrowing will hedge exchange risks and reduce taxes. Long-term employment will assist global managers and will strengthen such routines because firms can justify extensive training and worldwide job rotation. However, FDI in any specific market remains only an element in a corporate system of routines with common objectives and needs to be considered relative to other elements such as domestic capacity additions, corporate relationships, and trade. In any case, it will not be pursued for its own sake. Conversely, as there is a perceived need to manage the technology flow overseas, firms may make a marginally profitable FDI to achieve this. Similarly, they may not hold offshore units to particular profit objectives, but, instead, will assess a product’s global situation. This approach to internal cost management can generate real price/performance and competitive problems for producers who depend totally on local markets or look to an individual model’s profitability in separate markets, such as knock-down kit assemblers in developing countries.

It may not be possible to predict the competitive outcome of such differential objectives, but it is possible to note that Japanese auto FDI in Asia will differ from that of US firms, as does the attempt to manage the cycle and influence its outcome. Japanese car manufacturers appear to be increasing global market share, and despite the Big Three’s (Ford, GM, and Chrysler) recovery, their leading producers appear to be influencing the competitive agenda for the industry. Understanding and dealing with the consequences of these firms’ overseas presence may be difficult for non-Japanese managers and policy makers in countries like Vietnam as it requires getting outside their own motivational framework. It may also require changes in established approaches to industry development and FDI approvals. In addition, development and FDI policies can get caught up in concerns over taxes, transfer pricing, technology access and control, market exploitation, national origin, state subsidies, employment, and treaty relations within ASEAN or with other countries. Most politicians and bureaucrats will resist thinking about such issues, but given the potential size and importance of this industry to Vietnam’s development and the leadership role played by Japanese firms within Asia, such issues must be addressed. Vietnam should develop a strategy for the auto sector that will build on the motivations driving the FDI of Japanese producers in Asia and Vietnam. If done successfully, it can have larger implications for developing related industries such as electronics, rubber, plastics, steel, and oil. In turn, because macroeconomic results are composed of micro-decisions, and these micro-units are large, they will impact the entire economy. Clearly, attention to details is important.
Vietnam's Development Objectives

Vietnam is currently experiencing and projecting high growth. Given the experience of others in the region, double-digit growth would not be unusual. Still, such growth requires capital and infrastructure development, including roads and transportation. It also requires developing efficient manufacturing that can produce exports at competitive world prices to generate the foreign exchange to pay for necessary imports. Total reliance on agricultural or raw-material exports to generate exchange earnings does not work in the long term. Further, the country should be targeting development of value-added industries using indigenous inputs. In addition, an examination of Japan indicates a high savings rate is key to developing a competitive manufacturing sector, otherwise rapid growth and exploitation of raw materials can be inflationary, necessitating constant currency revaluation. High savings also reduces foreign capital needs, which eventually must be repaid. Nevertheless, as an immature debtor with a high-growth economy and initially limited export opportunities, exchange shortages will be a constant policy problem for Vietnam. At the same time, developing a transportation sector to support economic and manufacturing growth is necessary too. In fact, a recent master study by Mitsubishi estimates that, by the year 2000, Vietnam will require 12,800 to 17,300 cars and 47,200 to 63,000 trucks, buses, and utility vehicles (commercial vehicles) per year to meet its economic requirements. If all these were imported, the exchange costs would exceed US $1.4 billion or about $17,400 per vehicle for 80,000 units. This would conflict with efforts to conserve exchange.

To deal with this potential foreign exchange (FX) policy issue but still meet the expected needs for motorized transport, Vietnam's government is pursuing a classic import-substitution policy. In the process, like many countries before, it hopes to develop manufacturing skills to support further development. It has thus fostered establishment of three or more local joint ventures (JVs) that will assemble car kits supplied by major US, European, Japanese, and Korean firms, either directly or via their affiliates in other countries. In this respect, Vietnam is following the development pattern pioneered by Ford in the 1920s to take advantage of growing markets for cars through offshore assembly of its low-cost, mass-produced parts. This strategy was successful in competing against the more customized producers in Europe and Japan. The localized production was then gradually vertically integrated to local parts supply as foreign markets expanded and political pressures for more local content increased. The strategy was subsequently extended by them and others to many countries including Brazil, Mexico, Australia, Chile, and Argentina and more recently to several countries in Asia. By 1988 more than 50 percent of Ford's production was offshore and more than 30 percent of GM's and VW's. At the same time, these companies organized internationally on
a multidomestic basis to administer this collection of national producers, each with its own unique market and set of regulations.

Unfortunately, history indicates that, even on a fairly large scale, import substitution is costly and inefficient and rarely saves exchange. Car production in Mexico, Brazil, and Australia all illustrate this. For example, in summarizing the Mexican experience, Berry, Grilli, and Silanes note: "An important reason for the failure of the 1969-82 measures in promoting exports was the stream of incentives favoring the opposite: production for the domestic market. This has created a relatively inefficient domestic assembly industry, which frequently relies on outdated production techniques and short production runs. This industry is unlikely to survive a free trade agreement in its present form."53 Indeed, VW had to take a massive strike in Mexico to introduce new work rules to prepare for meeting competition from the lean production systems of the US and Canadian Japanese transplants, along with those re-engineered by the Big Three to meet similar competition.53 In sum, "The likely bright future of the export-oriented sector is not shared by the rest of the parts and vehicle plants in Mexico. These plants are the result of decades of import-substitution policies, oligopolistic protection, and restricted entry conditions, all of which impeded technological progress. These vehicle assembly plants have very short runs, far below world scale (around 250,000 units), aiming at a small closed market with few opportunities for competition. Levels of technology are low, there is little use of robotics, and antiquated equipment dominates the environment. The organization of production and labour-management relations are far from current lean production techniques or their closest equivalent in non-Japanese firms."54

If this summarizes the Mexican experience after several decades of production using an import substitution-based auto production assembly strategy, despite a more advanced and wealthier economy with a market of over 600,000 cars, what is the likelihood it will be successful for Vietnam, especially when analogous testimonies could be written of similar approaches in countries like Chile, Argentina, and Australia? Further, the import-substitution process in vehicles places a large tax on transportation, affecting the competitiveness of all sectors relying on motorized supply. Nor does it develop the lean-production, world-class manufacturing skills that are necessary to compete in the 21st century.55 This is because it fails to build on the motivations and infrastructure established by Japanese producers in ASEAN and the Asia-Pacific region. Also, foreign suppliers have little risk and can walk away from their JVs any time, having achieved returns on their investment through access to Vietnam's market that a 200 percent excise tax on imported cars virtually guarantees. That is, from their standpoint, this is strictly a market access strategy to take advantage of a high effective tariff and rapid demand growth. Thus, while this approach will use scarce

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Vietnamese managerial and engineering resources as well as land, construction materials, and power, the potential pay-off is unclear at best.

Unfortunately, the current multiplicity of players with emphasis on import-substitution production assembly and some parts manufacture for local car production tracks the histories of high cost and production inefficiencies witnessed in other developing countries from Mexico to Malaysia. Currently there are three local assemblers in Vietnam, with others proposed. The various ownership and production affiliations as well as some currently announced proposals follow.56

- Vina Star Motor Corp., outside Ho Chi Minh City, is a US $50 million JV owned by Mitsubishi Corp. and Mitsubishi Motors (25 percent each), the Vietnamese Transportation and Communication Import-Export Corp. (a state-affiliated corporation, 25 percent), and Proton (25 percent) from Malaysia (which is closely tied with Mitsubishi, produces about 110,000 vehicles per year, and has about 70 to 80 percent of the highly protected Malaysian market; their major competitor is affiliated with Toyota and Mitsui through Daihatsu). The JV’s intent is to initially produce about 5,000 Delica minibuses per year, increasing to 12,000.

- Mekong Motors is a JV, which is 30 percent Vietnamese, 35 percent Sangyong Motors (Korean), and 35 percent Saeilo Machinery (Japan), that will produce Jeep Cherokees. It also assembles Hino two-ton trucks, giving it a Toyota affiliation, and Fiat buses, plus assembling for Hyundai and Nissan; output is 5,000 units.

- VMC (Vietnam Motor Corporation), established in 1992, is owned by Nichimen, Columbia Motors of the Philippines (also Nichimen ownership), and Hoa Binh (a state-owned firm). It will produce the Mazda 626 and 323 from kits and thus has an affiliation through Mazda to Ford. It will also assemble kits for the 5.25 BMW, for Kia (Korean), and Renault, starting in 1995. It is having discussions with GM as well.

- Toyota is studying an investment proposal for van production, despite its connection with Mekong via Hino. Vietnam Engineering and Agricultural Machinery and Kuo (Singapore) are rumoured as partners. Toyota is also entering through an aluminum-frame JV with Hai Phong Enameled Aluminum.

- Daewoo (proposed US $35 million investment) is 65 percent owned by Daewoo (Korean) and 35 percent by Hanoi. It will produce 10,000
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...military vehicles, but also plans to assemble the Daewoo Racer and perhaps the Opel Kadett on a semi-knock-down basis.

- Citroen and Peugeot have also applied for a licence to establish a US $60 million JV plant with the Vietnam National Forestry Machinery Corporation to initially produce 1,000 “405” cars, rising to 7,000 in 10 years, but are being guided to an existing assembler, probably Vina Star Motor or Mekong.

- Mercedes is discussing producing 10,000 cars and commercial vehicles with a local partner.

- Isuzu, GM’s Japanese affiliate, together with C. Itoh is considering a JV to assemble pick-up trucks. It is not clear whether, due to the GM connection, this is with VMC.

- Nissho Iwai has one JV scheduled to produce auto parts starting in 1995; it is also considering JVs in conjunction with Suzuki Motors and Bridgestone as it is already importing and distributing Suzuki jeeps and does not want to lose its market due to the new tax.

- Honda currently imports over 200,000 motorcycles, giving it an excellent market and service base to establish a factory for motorcycles and related parts as well as to sell and service cars. The replacement market for Vietnam’s 2.2 million motorcycles itself is significant. However, it does not plan to build such a factory for a few years until the market reaches the right scale. Honda, along with Toyota, also has the strongest position in the Thai auto market, having announced an expansion in production capacity to 100,000 units by 1996.67 (Toyota’s plans in Thailand are to increase capacity to 200,000 units by 1997.) So while Honda has not proposed a car JV, it, along with Toyota, actually appears the best positioned among Japanese manufacturers to enter into a parts-production arrangement in Vietnam for cars and motorcycles.

If these joint ventures produce all the vehicles they have announced, the total number assembled in Vietnam per year should reach 50,000 in a few years; by 2000, they could be meeting Vietnam’s requirement of roughly 80,000 vehicles per year of different types. However, this projection must be considered in light of the Honda and Toyota plants in Thailand, which have already announced that they will produce 100,000 and 200,000 cars, respectively, by 1996-97. In addition, they and other firms have plants producing millions of units in Japan, Europe, and North America in a global industry where efficiency is scale intensive. Indeed, to support the obvious
inefficiencies of this approach, the Vietnamese government has recently imposed an excise tax of 200 percent on imports but only 40 percent on domestically produced cars. This means, depending on the tariff on components, the effective rate of protection to assembly value-added is as much as 640 percent, since only 25 percent of a car’s production value is in assembly. No wonder the Mitsui general manager wants to enter the assembly business rather than auto parts. From a practical economic standpoint, this cannot be successful and is an expensive misallocation of scarce resources that becomes more costly as the market grows and eventually will have to be painfully unwound. Indeed, because imported parts are likely to remain important to the production process with no offset from export earnings, Vietnam’s FX policy flexibility could become captive to the JV investments. This will lead to ineffective policy directives to increase exports that actually result in increased net imports, as seen in Mexico and Malaysia.

An alternative and better approach is to trade market access for regional or global parts supply on a world-class basis under a regional free trade agreement. This model is more logical and has shown more success in practice. It also benefits from evolution and motivations of the Japanese industry described above and currently supported by MITI through grants and technical assistance using retired auto executives. Under this policy, Vietnamese parts’ manufacturers would become part of the Japanese vertical supply chain for ASEAN, the Asia-Pacific region, and eventually the world. There is no real alternative in the foreseeable future to dealing with Japanese firms since ASEAN is the logical primary market for Vietnam, and Japanese firms directly or indirectly control 80 percent of it. Also, their local production is in place and capable of rapidly expanding with the market on an integrated basis, while most US producers are still planning their entry strategies with a few thousand cars. Positioning themselves for this expansion has been a basic part of their growth-chasing strategy, and there will be no shift in competitive position by the time market growth slows and changes in market share become difficult to achieve.

Yet, this is an opportunity for Vietnam because it will enable its labour force and managers to be trained as part of a global, lean-production system and to understand world scale and quality manufacturing. However, it will mean shifting the “Master Plan” prepared by Mitsubishi, which proposes assembly and does not address exchange earnings from parts supply linked to sales of finished vehicles in the local market so there would be less exchange loss from development of the industry and the transport sector. This approach would facilitate more rapid expansion in transportation, assisting industrial development generally. In turn, the parts selected for manufacture can be linked to the development of other sectors where Vietnam might have a comparative advantage, such as electronic assemblies, plastic parts.
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(petrochemicals), or tires (rubber). In this manner, non-Japanese firms as well as Japanese firms would have a reason to source parts to sell vehicles back into Vietnam and to obtain world-class parts at a competitive price. Once this supply structure is established, it then becomes more difficult for foreign firms to walk away as they did in Mexico as soon as the domestic market matured and their competitive position became less successful. Such an approach would also make it more likely that Vietnam would develop a competitive, non-inflationary manufacturing sector. Unlike the current approach, it would also enable Vietnam to more aggressively import used cars from these same producers that they receive as trade-ins elsewhere, thus extending the value received for scarce foreign exchange.

Examining the Canadian and Mexican experience indicates this strategy’s potential benefits. Further, Thailand has recently changed and lowered its tariff and taxes on vehicles and parts to move in the direction of Canada and Mexico. Their tariffs are 20 percent on parts, 42 percent on small cars, and 68 percent on large cars, implying effective protection on assembling small cars of 88 percent and large cars of 192 percent from outside ASEAN, but only 44 percent and 98 percent, respectively, if from within ASEAN. While high, this still contrasts with Malaysia and Indonesia, and they may eventually be forced this way by competition from Thailand, which will have the largest market and production in the region. (For example, Indonesian tariffs on finished imports run from 175 to 275 percent.) Further, the likely success of Thai policies means Vietnam’s fledgling auto assemblers will come under pressure too, once Vietnam’s application to enter ASEAN is approved. This is because the existing agreement and the trend to further lower tariff barriers on manufacturing trade within ASEAN will limit their protection policy options. It is important, therefore, to position the industry as part of the supply chain now and to convert the assembly operations to alternative uses. At a minimum, this means reversing the recent excise tax increase applied to imports, or if the objective is to discourage or limit auto purchases compared to utility vehicles or trucks, then it should be applied to all vehicles of that type whether produced domestically or imported. An auction system for the right to buy a car or other vehicle is another approach to capture economic rents as government revenues. It also ensures scarce resources are allocated where they will have the greatest economic return. Under this system, the right to purchase at a particular price the limited number of vehicles available via local production or via imports in return for parts purchases is auctioned off by the government each month.

What kind of parts could Vietnam supply under this strategic scenario? The Mexican experience is instructive. Parts produced in Mexico for the local and export markets are: wire harness, seat covers, gasoline injectors and engine controls, radios, bumpers (plastic), ceramic magnets, glass windows,
climate controls and radiators, steering columns and catalytic converters, plastic springs, electrical components, cassette players, speed counters, road wheels and parts, gear boxes, and leather wheel covers. For similar reasons, Japanese producers are currently sourcing wire harnesses in Singapore and Taiwan. Since wages in these countries are rising, moving this production and other labour-intensive items to countries like Vietnam is logical, especially if Thailand becomes a regional assembly centre.

The success of the Canadian auto pact and the Mexican *maquiladoras* (manufacturing facilities located along the US-Mexico border) in producing auto parts is in marked contrast to Canada prior to the pact or to the Mexican domestic industry. They demonstrate the superior results of an export-oriented parts production strategy in return for market access. The 1965 Canada-US auto pact was a win-win situation for the US and Canada. Between 1965 and 1979, Canadian production tripled, mostly as exports to the US. Before the pact, exports were negligible; by 1970, over 70 percent of Canadian production was bound for the US or about 1.5 million units, while US imports rose from 5 to 50 percent of the Canadian market or about 1 million units. In the process, not only did autos become a major Canadian industry and employer but a net FX earner, while US producers could increase scale and efficiency within North America. Similarly, *maquiladora* auto parts plants "have experienced dynamic growth in the past decade, especially since 1984. From about 12,000 workers in 1982, transportation equipment maquiladoras employed about 100,000 workers in 1990. That year, their total value added represented an average of 23 percent of exported value and had multiplied sevenfold since 1982. Automotive maquiladoras are the second most important maquila group following electronic materials and accessories. They contribute one out of five workers in the total maquiladora operations located in Mexico."63

Finally, Toyota seems to be again redefining global car production in which a parts-oriented strategy may become strategically more important. That is, in their new Kyushu plant, they have pioneered shorter assembly lines, relying on greater integration from parts suppliers.69 While several analysts have discounted this development's importance, I believe it is a mistake to overlook its strategic implications, given Toyota's past performance in revolutionizing the industry.70 Under the new system, assembly lines are shorter, there are fewer parts with more commonality, and there is greater worker involvement. While Nissan and Mazda are moving toward more robotics, Toyota notes turnover in Kyushu is significantly lower and they have migrated the program to other Japanese plants. It has also enabled them to hire more women and older workers without any reduction in quality since it is easier to train them for the shorter production lines, and they feel less intimidated in shutting down the line if there is a quality problem. Such a
shutdown is also less disruptive to production dispersed over a larger number of lines. In addition, it has allowed them to return to their roots of trying to supply a variety of models efficiently, even when demand for a model might be small. In the current recession, this has become critically important.

Though most analysts see this as just a response to an aging labour force, I believe it has broader implications for the industry and for Vietnam's development strategy too. Looking at high-growth Asian markets, we see vehicle demand growing quickly. It is estimated that by the year 2000 the Thai market will have grown from 450,000 units in 1993 to 1 million (up from only 67,000 in 1986); the Malaysian from 165,000 to 400,000; the Indonesian from 220,000 to 375,000; the Philippine from 87,000 to 185,000; the Chinese from 1.25 million to 2 million; the Korean from 1.75 million to 3.5 million; and even the Japanese from 4.5 million to 7 million.\textsuperscript{71} As the demand mix between autos and commercial vehicles will be different for each country, and within each category, there will be several models, and the producer who can meet this quickly growing demand for multiple models will have a great advantage. Of course, this is where Toyota started in the 1950s, responding to the diverse requirements of a rapidly growing Japanese economy,\textsuperscript{72} but they now have the Toyota production system and a globally integrated supply base to assist them in meeting this challenge. Shorter, user-friendly assembly lines will help them meet growing Asian demand while dealing with labour force changes in Japan. Not only will they produce a multiplicity of models more efficiently, but shorter training times will allow them to develop local labour more quickly. Higher retention rates will also enable them to incorporate and keep the tacit knowledge and skills that are critical to their system, including shutting down the line to ensure quality. At the same time, since labour in these countries is cheaper than capital, this approach takes advantage of relative factor costs in the high-growth markets they are trying to capture. Conversely, a production strategy emphasizing robotics is more capital intensive, and so is out of sync with local factor costs. In addition, robot-based production requires sophisticated maintenance that may not readily be available, plus robot part inventories. It may also be sensitive to brown-outs from power shortages. However, robots do little to reduce the minimum efficient plant size below 250,000 units a year, which is required in order to make plants like Toyota's Thai expansion project efficient by world standards.

Another aspect of the process is greater parts supply integration and the use of larger, more standardized subassemblies, that is, more value-added prior to assembly. This reflects Toyota's experience that the largest savings and productivity increases occur through suppliers.\textsuperscript{73} However, this reduces value-added in assembly. In an Asian market, Toyota will then benefit from greater dispersion of production value and an ability to equalize foreign exchange flows between countries producing different subcomponents. It will
therefore complement the parts' network strategy that Toyota is implementing in ASEAN where engines are made in Thailand and Indonesia, transmissions in the Philippines, and steering gears in Malaysia, taking full advantage of the recent 50 percent tariff reductions on the import of parts manufactured in the region. 74

If this leadership strategy works in its Japanese plants, based on its previous behaviour, we can expect Toyota to migrate this strategy to its US and European plants and to have it ready for introduction in its announced Asian expansions over the next three years. It will then be quickly emulated by its Japanese and US competitors, transforming the economics and composition of the Asian vehicle market just as it has the North American and Japanese markets. What would evolve then is a concentration of large, subassembly production facilities like engines, transaxels, exhaust systems, wheels with tires, seats, etc., in particular countries with relatively small, efficient assembly facilities serving specific regional or local markets to reduce transportation costs with a balancing of exchange costs between countries. (Such a mixed production and exchange-balancing strategy as a way to serve multiple markets is feasible since Honda and Toyota have already announced something similar between North America and Japan based on currently larger and less-flexible production facilities.) Adding to this assembly and cost reduction strategy is Toyota's belief that, in the future, roughly 30 percent of a car's value will be electronics and electrical components, thus facilitating and encouraging the dispersed production of subassemblies. Given this evolving industry structure and competitive environment, a parts-based, export-oriented auto development strategy becomes even more important since the value-added at the assembly level will decrease, while the sophisticated technologies, production techniques, and organizational structures necessary for future global manufacturing competitiveness will be supplying parts and larger subassemblies. Vietnam, as a late follower, can take this road from the beginning, rather than following those who have tried import substitution based on kit assembly and failed. This again argues changing the "Master Plan." 75

Summary and Conclusions

This paper has posed that Japanese auto MNCs have different motivations driving their FDI and global marketing, and supply strategies than their Western counterparts, based on differences in historical development and experience with the international product cycle. They appear principally interested in firm survival and expanding global market share. Diversification is perceived as risky and a second-best alternative. Similarly, they invest to ensure employment income. They have also successfully transplanted their systemic manufacturing advantages as part of this process. Under these
conditions, they pursue FDI, marketing, and supply strategies abroad with implications not fully appreciated by foreign competitors or recipient countries. These developments have changed competition and development in a now global industry. Therefore, in formulating its auto industry development strategy, Vietnam must create policies placing it in the mainstream of this process, especially as Japanese producers dominate auto production and supply within ASEAN to which Vietnam has applied for admission and which is the most logical market for Vietnamese-produced parts.

In this respect, the current approach of assembling knock-down kits is not appropriate. A 1920s strategy developed by Ford to expand its mass production manufacturing advantage globally, it was a successful strategy against its competitors' customized production, and Ford's strong position overseas today is a legacy of that success. However, the Japanese transnational, lean-production strategy has superseded this. So by adopting a kit-assembly production program, Vietnam has foregone the basic advantage of a late follower, that is, not having to tread in the innovator's or initial followers' exact footsteps. Rather, a late follower can leapfrog or accelerate the development process by applying the latest technologies and organizational methods to a well-educated labour force. A proposal to Vietnam that it should adopt the crank telephone and twisted copper wire technology as its initial telecommunications system, because this is how Triad countries developed and it would create employment for many Vietnamese as operators and repairpersons, would be rejected. Rather, the government would demand installation of an optical fibre, cellular, and satellite-based system, which is not only available but is cheaper to install and operate, is much more efficient, and is more reliable. In addition, these systems can carry the massive data required for modern communications that is a key part of the infrastructure needed for Vietnam to develop economically in the 21st century.

Yet, in auto manufacturing, the development policy selected has done this, that is, adopted the equivalent of the crank telephone, twisted-wire technology. It has foregone the advantage of a late follower in adopting a more advanced system and has placed itself at the end of the manufacturing food chain rather than becoming an integrated supplier to the ASEAN, Asian, and global auto markets. More importantly, its labour will not be trained in the production process and supply system representing the 21st century standard. The experience of US and European firms in countries like Mexico, Brazil, and Australia indicates globally efficient production and supply cannot be achieved based on a kit strategy combined with local content regulations. The Asian countries following that model, such as Malaysia and Indonesia, are having poor results, and such an import-substitution strategy is directly contradictory to the export-led growth model. However, following the single nation-based import substitution and export development strategy pioneered
by Japan cannot work in a globalized market either. This is because the Japanese have now successfully transplanted their production process and system supply advantages to manage the shift in comparative advantage. Their US and European competitors are in turn reorganizing themselves to respond.\textsuperscript{77} The Koreans’ difficulties in the North American and European markets, and the recently announced closure of their plant in Canada, are indicative of this fact.

A strategy integrating Vietnam into the lean-production supply chain with flexibility to sell to multiple auto producers and to align different parts’ manufacturing plants with different Japanese, US, or European groupings is the appropriate approach. This process should be facilitated by the greater cooperation being explored between Japanese and foreign firms (e.g., Ford-Mazda or GM-Isuzu) and among Japanese firms (e.g., Isuzu-Subaru), even as they compete elsewhere. Canada’s success with this strategy via the US auto pact and, more recently, NAFTA or the Mexican auto maquiladoras represents the appropriate trade policy model—one that seems to have been adopted by Thailand within ASEAN.\textsuperscript{78} The Canadian and Mexican strategies are true export-led growth models that improve productivity, achieve economies of scale, and substantially reduce exchange requirements. Such an initiative should also improve the negotiating position of Vietnamese suppliers. The quick resolution of recent labour disputes in the US and Canada demonstrates the influence parts suppliers and labour can have in a highly integrated, regionally based, just-in-time supply system. Finally, this approach makes it easier to tie in Vietnam’s transportation sector development and auto parts production capabilities with creating world-class manufacturing in related sectors.

The paper has provided an alternative framework within which to analyze Vietnam’s proposed auto manufacturing development in terms of policy and industry structure. The analysis shows that the competitive impact of Japanese producers’ FDI and marketing in the global auto industry and particularly in Asia and ASEAN must be addressed as an integral part of Vietnam’s car industry development; the leading Japanese auto producers are pursuing a successful competitive scenario that will influence and shape the development of the Asian auto industry based on a continuation of established corporate routines of which FDI is an integral part. However, the analysis and evolutionary theory also emphasize that, while Japanese decision-making has many common factors, each competitor and its supply structure are still different and must be analyzed separately. Because analyzing these considerations is complex, creating a successful new development strategy based on an evolutionary integration with the ASEAN, Asian, and global auto supply chain will require considerable analysis and discussion within and between affected corporations and policy groups. Such developments will vary
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by company according to its strategic resources, including its government relations, and the negotiations are likely to be highly charged. This is because substitution of a uniform excise tax or auction system on all vehicles for the present structure, which favours parts imports and local assembly over assembled vehicle imports, is likely to be controversial due to the vested interests and large investments of existing assemblers based on the present system.

Nevertheless, given the success of Japanese auto MNCs' current strategies, especially in Asia, they are not going to change; Vietnam's policy needs to be integrated with and take advantage of this evolution. This will be a long-term process since changing the currently proposed and accepted auto industry development pattern will run counter to many interests. Yet, based on experience elsewhere, the increased benefits to Vietnam of a true export-led auto industry growth model that is based on participating in a regional or global transnational lean-production system are clear. The government should thus make the effort to influence Japanese firms' FDI in Vietnam in this way, by controlling their access to the emerging Vietnamese market and their relationship to existing assembly operations. A successful auto parts development strategy based on lean production and sales to multiple auto producers in return for local market access for completed vehicles can provide the basis for Vietnam's manufacturing-sector learning and for adopting 21st century manufacturing methods. The alternative is to step back to the 1920s. This evolution in terms of Vietnam's growth and development is therefore important and should be carefully managed.

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72. Womack, Jones, and Roos, Machine That Changed the World (see n. 18); Abegglen and Stalk, Jr., Kaisha (see n. 1).

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