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Shigehisa Kasahara

No. 169
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DISCUSSION PAPERS

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TO EAST ASIAN REGIONAL DEVELOPMENT**

*Shigehisa Kasahara**

No. 169
April 2004

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THE FLYING GEESE PARADIGM: A CRITICAL STUDY OF ITS APPLICATION TO EAST ASIAN REGIONAL DEVELOPMENT

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(United Nations Conference on Trade and Development)

Abstract

It is often claimed that what is popularly known as the “flying geese paradigm” of dynamic comparative advantage has accurately depicted the East Asian catching-up process. This paper presents a critical study of the paradigm, as well as its application to the current situation in East Asian economic hierarchy. The paper first presents the various versions of the paradigm, and discusses similarities and differences among them. It then evaluates the application of the paradigm to the East Asian regional development context by identifying major theoretical, conceptual and empirical problems that come with it. It is the author’s hope that the arguments presented in this paper will contribute to the further enrichment of future discussions on the East Asian development experience.

INTRODUCTION

It is often claimed that what is known as the “flying geese paradigm” of dynamic comparative advantage has accurately depicted the East Asian catching-up process through a regional hierarchy consisting of Japan, the first-tier newly industrializing economies (NIEs) (the Republic of Korea, Taiwan Province of China, Singapore and Hong Kong (China)), the second-tier NIEs (Malaysia, Thailand and Indonesia), China, and other countries in the region. While the popularity of the paradigm has somewhat declined since its heyday during the late 1980s and the early 1990s, it remains arguably the most widely held conceptual framework for the catching-up process in the region. The paradigm postulates that, under appropriate conditions, North-South economic linkages, i.e., the relations between the developed and the developing economies, could be beneficial to all, and that the East Asian development integration is a case in point. Thus, economies in East Asia that have actively established such linkages through trade and investment have exhibited remarkable performances that challenge the dependency school’s doomsday scenario.¹

The flying geese paradigm originated in the 1930s with what Kaname Akamatsu (1896–1974) called the *ganko keitai* (a flock of flying geese) phenomenon of industrial development in catching-up economies. It is said that the paradigm became part of Japan’s propaganda during World War II by lending the intellectual legitimacy that was needed to create *The Great East Asia Co-Prosperity Sphere*. After the war, this connotation continued for some time to tarnish the image of the paradigm.

¹ While they are few in number, some observers have questioned the extent to which the flying geese paradigm accurately depicts the overall situation of East Asia. Most of them, according to Kojima (2000), have done so from the dependency perspective. Yang and Lim admit that the dependency school provides some important insights in understanding development and underdevelopment in a global context; most importantly, the diagnosis of the dynamics of the world capitalist economy. Yet, they do point out that the dependency school tends to neglect internal factors within developing countries which may have contributed to their relatively unfavourable economic performance (Yang and Lim, 2000).

Consequently, the paradigm remained buried from public sight (Korhonen, 1994a). Furthermore, the fact that Akamatsu's own research based on a certain product-cycle theory was mostly published in Japanese² is crucial to why the FG paradigm remained relatively unknown in the West until recently, even after Vernon (1966) popularized the product-cycle theory which "dynamized" the neoclassical theory of international trade (Clark, 1975:6). Only in the second half of the 1980s was the flying geese paradigm taken up again in Japan, first by members of the academic circles, and then by public officials as a framework for the regional integration of East Asia through Japanese foreign aid and investment (Jomo et al., 1997). Since Akamatsu's time, the paradigm has undergone various modifications. Its modern versions are often presented for prescriptive purposes; i.e., propagating the notion that development policies adopted by Japan could be replicable for its neighbours (Kosai and Takeuchi, 1998).

The form of regional development as postulated by the modern flying geese paradigm presupposes the existence of hierarchy, with a dominant economy acting as the growth centre and followed by other developing economies. With the increasing interdependence among regionally clustered economies in East Asia being interpreted as a sign of integration, an additional element that the modern paradigm has presented is a framework for regional integration. Henceforth, the regional group as a whole gradually develops industrial sophistication, as each of the region's economies benefit from the externalities and linkages arising from transactions among them.

The following pages consist of four sections. Section I introduces versions of the flying geese paradigm; and section II compares and contrasts them. Section III discusses various issues surrounding the paradigm; and finally, section IV summarizes the critical discussions on the paradigm as applied to East Asia.

I. DIFFERENT VERSIONS OF THE FLYING GEES PARADIGM

This section briefly describes the principal elements of Akamatsu's (A) original concept of the paradigm; (B) the modern product-cycle theory; and (C) the modern "multi-sequentialist" versions of the paradigm – hereafter collectively referred to as the modern FG paradigm.³

A. The original framework by Kaname Akamatsu

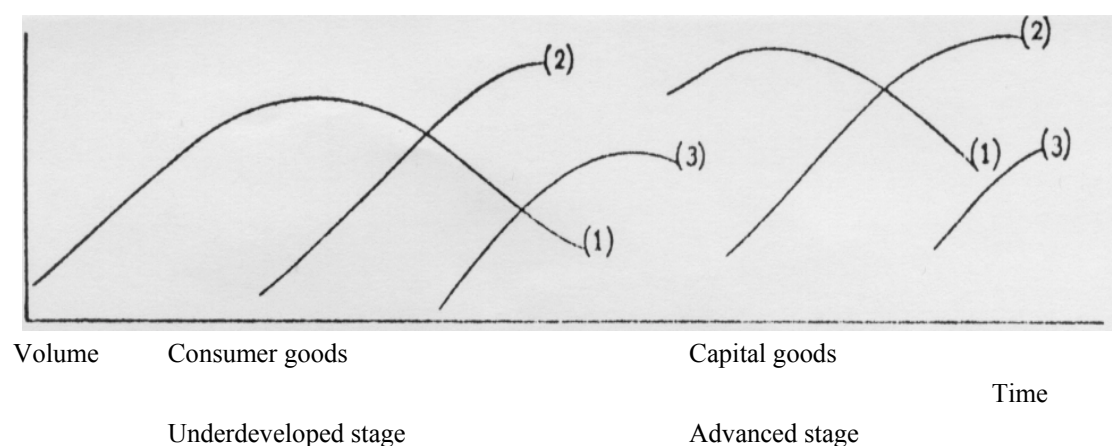
The term "flying geese" (FG) came from the graphic presentation of three time-series curves for a particular product, with the time dimension on the horizontal axis. The first curve represents import; the second is for production in a national economy; and the third for export.⁴ The sequential appearance of these curves on a graph resemble geese flying in orderly ranks, each forming an inverse V, like geese flying in formation. Akamatsu formulated the paradigm on the basis of Japan's experiences in catching up with the West. He explained how the import-production-export sequence of activities usually occurs for each product in the industrialization process – i.e., along the passage of time.

² There are two notable exceptions: Akamatsu, 1961 and 1962.

³ For recent literature survey of various versions of the FG paradigm from a historical and comparative perspective, see Kojima (2000).

⁴ Throughout this paper, a "product" should also be understood as a "product group", unless stated otherwise.

Akamatsu's original flying geese paradigm: A graphic presentation



Source: Akamatsu (1961:206).
Note: *Vertical Axis:* Volume of: (1) import, (2) production, (3) export.
Horizontal Axis: The passage of time.

Akamatsu (1961) presented a three-stage model of trade as a proxy, so to speak, indicating the level of economic development of late industrializing economies. His model was developed in the historical context of East-West trade relations⁵ (i.e., the economic relations between the Euro-American leaders and Asian followers). During the first stage, the follower economy begins to import foreign goods, which, through demonstration effects, gradually instigates the formation of local industrial development. The second stage starts with the actual production of the imported manufactured goods (import-substituting production), with either local or foreign capital, or possibly a combination of the two. The third stage is reached when the local production increases further to the extent that excessively produced goods begin to be exported.

For each product group, these three stages occur sequentially. At each moment in time, the industrial outlook or, more accurately, the product mix of the national economy, consists of collective snapshots of activities that correspond specifically to each product group. The FG paradigm refers to a dynamic situation in which a follower, in pursuit of development, emulates the industries of advanced economies in a manner compatible with its *own* factor and technological endowments at a given specific time. As will be discussed later, the modern versions of the FG paradigm explain how factor and technological endowments could be augmented by activities of transnational corporations (TNCs).

For Akamatsu, industrial development essentially exhibits production diversification of two kinds. One is the “intra-industry” product cycle that is created by the emergence of new product groups within each industrial sector, i.e., from crude and simple items to complex and refined goods as, for example, the production from cotton to woollen and synthetic materials. The other is the “inter-industry” product cycle that shows the level of development of any national economy. This

⁵ In the following discussion on Akamatsu's flying geese framework, the West, the Euro-American leaders, the developed economies, the leader economies, etc. are used interchangeably; and likewise for the East, the Asian economies, the follower economies, the catching-up economies, etc.

development is characterized by a shift in the relative mass of production from consumer to capital goods as, for example, the production from textile materials to steel, shipbuilding, automobiles and computers.

Each product cycle, whether intra- or inter-industry, repeats this three-stage import-production-export sequence. At the same time during the cycle the efficiency and competitiveness (thereby raising value-added as well) in producing each product group is enhanced. Any product group whose production process can no longer be enhanced in terms of efficiency and competitiveness ceases to exist. This procedure is called the “rationalization” of production. Moreover, over time each product cycle also contributes to the “diversification” of production (the diversification in the structural compositions of industries and exports). Thus the interaction between, and parallel progress in the rationalization and diversification of production could stimulate the industrial development of the national economy (Kojima, 2000:379).

Regarding the industrial development of the follower economies, Akamatsu (1961:11–12) further points out three sets of facts:

First, for all industrial goods there exists a sequential order, from import to domestic production and further to export. Secondly, the time for the curves of domestic production and export to go beyond that of import will come earlier in crude goods and later in refined goods, and similarly, earlier in consumer goods, and later in capital goods. Thirdly, the import curve falls in proportion to the rise of the domestic production curve, and it is probable that the export curve will sooner or later begin to fall with respect to crude or consumer goods and the domestic production curve of these goods will also decline in the future.

Although he failed to elaborate on its mechanism, Akamatsu affirms trade as the main way of introducing new products and technology into a country. Being either much cheaper or of a modern type vis-à-vis local counterparts, imported goods are likely to drive many local firms out of business, and impoverish many manufacturing segments in the follower economies. Over time, however, the situation will somehow reverse itself since, as Akamatsu’s argument goes, imports somehow facilitate the transfer of technology and the acquisition of the capital goods needed to produce the import-substitution products. In any case, as consumers in the follower economies acquire a taste for modern goods, the local market for such goods will expand. And when the market in the importing economy is large, or becomes large enough, local firms may effectively find their own niche in it.

When original producers/exporters of particular products lose competitiveness in the world markets, their domestic production may also be phased out. However, Akamatsu is vague regarding the extent to which the domestic market of the original exporter will be taken over by original importers – i.e. the followers – abroad.

Akamatsu’s “dynamic” framework is built on Hegelian dialectics such that any given national economy, being in a perpetual motion, tends to move to higher stages of industrial development (Korhonen, 1994a). Akamatsu incorporates the concept of *heterogenization* and *homogenization* based

on his version of product-cycle theory.⁶ The value of these somewhat old-fashioned dialectical terminologies lies in the recognition that industrial upgrading is the process of resolving tensions between the old and new industrial establishments through the Schumpeterian concept of creative destruction. Thus as Rowthorn (1996:11) argues:

The initial penetration of imports into a follower country will benefit local consumers but impoverish producers. When local firms eventually develop and drive out imports, the follower country may benefit, whilst the leading country as a whole may suffer. These dangers are scarcely recognized in more recent versions of the flying geese paradigm which ignore or seriously downplay the costs and difficulties of restructuring.

We can sense that there exists another conflicting, if not exactly dialectical, element in his framework, which is analogous to imperialistic rivalry. Due probably to his mind-set to view Japan as a follower rather than a leader economy, Akamatsu did not pursue this argument. We are now in a more appropriate position to development this argument. Putting it in contemporary East Asian economic context, there are serious competitive tensions among the national economies, or more accurately their corporations, over sustaining their own industries that have begun to lose competitiveness (i.e., comparatively disadvantaged industries) and are transplanted abroad (for example, in the second-tier NIEs and China).⁷

B. The product-cycle theory

According to Vernon's product-cycle (PC) theory, the life cycle of each manufactured product goes through three stages: (1) novelty (a new product); (2) maturity (a mature product); and then (3) standardization (a standardized product). In the first stage, the utilized technology is not as yet defined, and product development expenditures dominate the cost structure. Therefore, an economy with relative abundance (thus comparative advantage) in resources related to research and development

⁶ In order not to divert our discussion unnecessarily, an explanation of Akamatsu's dialectics is relegated into this note. Akamatsu (1961:4–10) explained that being of a mutually "*heterogeneous* character" at the outset – due to different national environments, ways of life and culture, trade relations between the Western and Asian economies – presented a "possibility of creating complementary relationship, provided that the products of one area can become the object of want by the inhabitants of the other". In addition, the West (the colonizers) also ventured into Asia in order to produce the primary goods they themselves wanted, thereby turning Asia further into a complementary area for them. Akamatsu called this process, which seemed to coincide with the early phase of Western colonization, the "*heterogenization* (of Asia) with the Western European economy", and the corollary structural changes were a "structural contradiction". When Western consumer goods were introduced in the area and competed with native handcrafted goods, Akamatsu believed that "*homogenization* of the international economy" had set in. He then concluded that although "*heterogeneity* can be complementary and co-accelerative, while *homogeneity* can be substitute and competitive".

Asian economies gradually transformed themselves from primary goods to manufactured goods producers. Akamatsu called this process a switch from *heterogenization* to *homogenization* with the West. Western capital was initially geared to produce primary goods on a large scale, thereby effectuating heterogenization. But this level of production gradually evolved into industries similar to those in the West, thereby effectuating homogenization.

The increase in national capital after World War II began to create modern industries in some of the former Asian colonies, which further effectuated the homogenization process. In Asia, consumer goods production by using national capital also entailed imports of capital goods that were required for that production. Here rises "a *heterogeneous* complementary relationship of capital goods importation and consumer goods production", which means that "the export industry of the advanced countries has naturally developed from the production of consumer goods to that of capital goods". The process in which the development of the consumer goods production in the follower economy brought forth *heterogenization* with the capital goods industries of the leader economies was called by Akamatsu the "*high-degree heterogenization*". Thus, over the transition from *heterogenization* to that of *high-degree heterogenization*, Asian exports tended to change from primary goods to consumer goods, and its imports from consumer goods to capital goods. For Akamatsu, the final stage of *homogenization* is the process of the capital goods producing industries of Asian economies catching up with those of the West. This was for him the "*high-degree homogenization*".

⁷ As will be discussed further in this paper, this is a problem that may be addressed more appropriately to the modern FG paradigm.

(R&D), and skilled labour needed for producing the new product is likely to be an exporter. Although most explanations of conventional trade theories are based on the “supply-side” of comparative advantage, demand conditions should not be overlooked. Initially, a new product is designed for the tastes of the firm’s own home market because of the need for close contacts with consumers in the early stage of development of its market. The firm innovating a new product must experiment with the design in short production runs, making significant modifications after observing consumers’ response. Because of the absence of product standardization and product information, the price elasticity of demand is assumed to be relatively low. If scale economies arise from specialization in the home market, the product will be exported abroad. Perhaps, trade is likely to be greater between economies with similar per capita income and hence, similar taste. As the product matures and its production technology becomes routine, marketing and production costs – largely materials, capital and unskilled labour – become crucial in cost calculation, and consequently its production site is likely to be shifted outside its national territory.

What is crucial to the PC theory is that over the life cycle of each product, the relative significance of each input tends to vary. In technical terms, the PC theory fully recognizes the possibility of a “factor-intensity reversal” over the life cycle of each product which the standard neoclassical trade theory rejects. Because the availability of particular type of inputs differs among national economies, cost effectiveness in production, thus the location of production, tends to change over time.

According to Vernon (1966, 1971), new products or processes, typically the high-income products and labour-saving processes, are likely to be introduced in a highly industrialized economy like the United States which also has the benefit of its own large and affluent market and a relatively abundant supply of technological and entrepreneurial resources. A United States manufacturer that invents a new product first exploits its domestic market, and then exports it to other industrialized economies. When its overseas market grows and the product, together with its associated technology, is perfected and standardized, foreign firms are motivated to imitate and manufacture the same product for their domestic markets, and eventually too for export. These foreign firms may eventually succeed in exporting the product in question to the United States where the product was first conceived, produced and exported. Although the United States firm may attempt to counter the transgression by setting up subsidiaries, the result could be the hollowing-out phenomenon within the industry that had produced the product, thereby unfavourably affecting its own domestic workforce.⁸

Is the shift in comparative advantage in producing a particular product caused by changes in its production process with the given factor endowments, including technology, in each economy? Or alternatively, is it caused by changes in the factor endowments, including technology, in each national economy with the given specific production process? The reality is obviously a mixture of both, since neither of them – the production process nor the factor endowments – can be strictly rigid, particularly in the “dynamic framework” of the PC theory or the FG paradigm. With the risk of exaggeration, it nevertheless seems that the PC theory – with the analytical focus on trade and production activities (via FDI) *in the context of the strategic movements of large United States manufacturing firms* – tends to stress the former situation, while Akamatsu’s FG paradigm – with the analytical focus on trade and production activities *in the context of economic development of a national economy* – tends to stress the latter situation.

⁸ As mentioned in the text, this is one aspect to which Akamatsu did not pay much attention. His central concern was the process of catching-up by late industrializers rather than the process of being caught by early industrializers.

In this regard, Akamatsu's FG paradigm resembles the modern technology gap theory which postulates that a comparative advantage in a particular product (thus its exports) of an innovating economy exists until foreign producers succeed in eliminating what may be called "technology gap" or "imitation gap". However, it seems that the recent emergence of a generic category of what Winters (1985) calls "technology theories of trade" has effectively made the previously discussed difference between the PC theory and the FG paradigm inconsequential.⁹

C. The modern "multi-sequentialist" paradigm

The publication of Vernon's (1966) PC theory encouraged Japanese theorists (including Akamatsu and his students Kojima and Ozawa) to develop the FG paradigm into modern versions. One of the most notable developments in Akamatsu's FG paradigm in the post-war period, particularly after Vernon's publication, was the incorporation in the paradigm of a framework of regional development and integration (Kojima, 2000:376). *This does not mean, however, that Vernon's publication contains a theoretical base for regional integration as such.* Japanese theorists were the first to link the various overseas activities of TNCs (through sub-contracting, licensing arrangement, joint ventures, FDI, etc.) with the theme of regional integration, particularly in East Asia. As was mentioned at the outset of this paper, however, the FG paradigm remained mostly an academic curiosity for a while in the post-war period. It was the late Saburo Okita, a former Japanese Foreign Minister, who introduced the FG paradigm to a wider audience when he presented a speech at the fourth conference of the Pacific Economic Cooperation Council held in Seoul in 1985. After Minister Okita's speech, the FG paradigm rapidly gained popularity in the East Asian region, and has been thought to symbolize the Asian way of development and integration (Kojima, 2000:385). In the United States, the FG paradigm had begun to get noticed after Bruce Cumings published a famous article on the origins and development of North-East Asian political economy in 1984 (Cumings, 1984).

Modern theorists depict the mechanism of collective advancement by means of consecutive catching-up efforts. With the postulation of a pattern of continuously altering product-cycle-based trade, the modern FG paradigm focuses on the regionally contextualized transformation of national economies, rather than on the strategic behaviour of large firms of the PC theory. The FG paradigm presents large firms as "benevolent" conveyors of industrial knowledge – mostly industry-specific rather than firm-specific – from one national economy to another. In this regard, the modern FG paradigm may be regarded as a derivative of what may be called the industry (life) cycle theory.

The modern FG paradigm perceives the orderly transformation of economic activities among participating economies, which relegate its obsolete economic activities to less industrialized neighbours. This means that industrial products and production processes can be passed on from the

⁹ Winters argues for the possible extension of the PC theory into something closer to the modern FG paradigm. "As the product matures, its basic technology and functional specification become standardized (although peripheral product differentiation may still be rife), making flexibility [the flexibility required on the part of the producing firm at the early stage of the product cycle when uncertainty over production and marketability must be quickly adjusted] less important. World demand grows, making large-scale production feasible, and production costs become significant – especially if, as is usual, other, similarly endowed, countries are able to imitate the innovation. These changes tend to shift comparative advantage away from innovating countries, which are typically high-cost locations, towards other relatively wealthy capital-abundant, countries. Hence physical capital replaces human capital [skill labour] as intensive factor, and the innovating country may well switch from exporting to importing the good. The final stage occurred when (if) technology and specification become wholly standardized and universally known. This often allows production to be broken down into a number of relatively unskilled tasks, and certainly stimulates competition and pressure to reduce costs. Thus comparative advantage finally shifts to the low-wage, labour-abundant developing countries, which eventually become net exporters." (Winters, 1985:43–44).

more industrialized to the less industrialized economies through the increasing role of TNCs in accordance with dynamic and shifting patterns of comparative advantage.¹⁰

According to Ozawa (1991), the key to the national development and systematic regional integration is the simultaneous occurrence of three types of *orderly sequencing* of economic activities – multi-sequentialist – within and among a group of national economies:

- (1) *Product-cycle sequencing of a particular product (or a product group)*. The national economy follows the trade framework of a product life cycle, consisting of *four* stages: import, import-substituting production, export, and finally once again import.
- (2) *Industry-cycle sequencing of economic development*. The gradual development of industries in a manner compatible with a national economy's changing factor and technological endowments, which also means that the country shifts production activities (and export), from the lower value-added, more labour-intensive and less capital-intensive industries, to the higher value-added, less labour-intensive and more capital-intensive industries. This clearly is an indication of a structured and orderly process to generate self-sustaining and self-propelling forces along the dynamic path of comparative advantage.
- (3) *Inter-economy sequencing entailing the orderly transfer of industrial activities among national economies along the regional hierarchy*. These industrial transfers will be made in those following economies that have acquired the resources and technological capacities most suitable to the transfers.

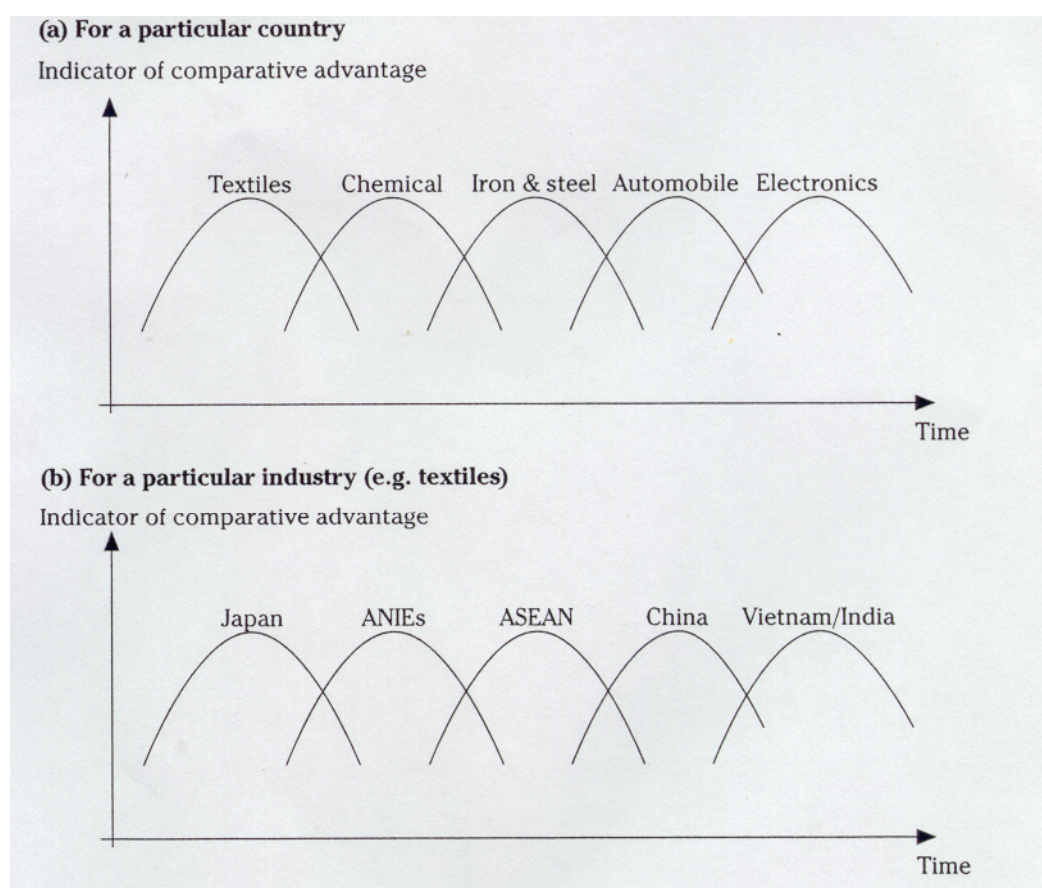
The first two types of orderly sequencing activities – the product-cycle and industry-cycle sequencing – as seen explicitly for the former, and implicitly for the latter in Akamatsu's framework, are "internal" in the sense that they occur *within* each national economy. The third – the inter-economy sequencing – is one that occurs *among* different national economies. Ozawa (1991) argues that TNCs, particularly those from Japan, tend to facilitate this type of systemic industrial relocation among national economies. In addition to FDI, Ozawa identifies other channels which facilitate inter-economy industrial relocation: licensing, subcontracting, technical assistance contracts, turnkey operation, market agreements (especially easier access to the leader's markets), financial loans, and official economic assistance – both financial and technical – to build infrastructure. As long as industrial upgrading occurs along the "correct" inter-economy sequence, TNCs do facilitate the restructuring of the economies of home and host.¹¹ Kojima (1978), who characterizes the FG paradigm as a "catching-up product cycle model", initially added the dimension of FDI to the FG paradigm. He

¹⁰ It is still debatable as to whether TNCs themselves are acting as creators or reacting as beneficiaries of these dynamic patterns.

¹¹ The idea that Japanese manufacturing FDI, as opposed to United States manufacturing FDI, tends to encourage further industrialization rather than deindustrialization of the home economy (Japan) was originally put forward by Kojima (1973). The essential contention of Kojima's argument runs as follows: Japanese FDI tends to occur in relatively labour-intensive industries that have become uncompetitive in Japan due to rising real wages, whereas United States FDI tends to occur in relatively technology-intensive industries that have formed an oligopolistic market structure in the United States. Thus, much of Japanese FDI is allegedly "pro-trade" or "trade-creating" in that it is found in export-oriented projects that principally cater to the markets of Japan and other developed economies, whereas much of United States FDI is allegedly "anti-trade" or "trade-substituting" in that it is found in import-substituting projects that principally cater to the local market. Kojima stresses that Japanese FDI is "macro-focused", and aims to develop the host economies, particularly of developing countries, so that they can supplement the Japanese economy, while United States FDI is "micro-focused" and aims to make profits for individual firms. Kojima's argument was once very influential on the study of Japanese FDI, but it has been vigorously criticized. Some argue that the special features of Japanese FDI were actually "transitional" and would disappear as the Japanese economy matured.

argued that the flows of both real and financial assets from Japan, put together and sent to follower economies as a package, would augment the benefits derived from such inter-economy linkages. As for the realization of the “orderly progress” of East Asia, the modern FG paradigm upholds an optimistic view that with the emergence of a hierarchically organized regional division of industrial labour, involved economies could avoid the situation of too many being engaged simultaneously in export-oriented production for a narrow line of product groups. This is because FDI could help the home economy by relocating abroad those industries and activities that have lost international competitiveness. This relocation releases the resources that are needed for upgrading export-oriented, competitive industries. That FDI contributes to the industrialization of host economies is now taken as a matter of course. As will be discussed below, empirical evidence of what is known as the “spillover literature” has provided very mixed signals on the effects of TNCs on local productivity.

The modern “multi-sequentialist” flying geese paradigm: A graphic presentation



Source: Yamazawa’s framework as presented in Kwan (1996:162).

According to Ozawa (1991:104), what drives the flock of geese forward is the leader’s perceived imperative for internal restructuring, with emphasis shifting from a labour-intensive (low value-added, low technology), to a more capital-intensive (higher value-added, higher technology) set of activities. Thus, the regional industrial restructuring process is characteristically a “top-down”, rather than a “bottom-up” process. In East Asia, the mechanism of the third type of sequencing – the inter-economy

sequencing – is the main source of growth for second-rank followers (the first-tier NIEs), which will emulate the leader’s (Japan) restructuring efforts over time and eventually as a supplementary force serve to transmit their own growth stimuli, however small, to the next rank of followers (the second-tier NIEs and China). One interesting question is what are the principal factors that induce the leader’s imperative for internal restructuring. In the East Asian context, protectionism, particularly in the United States and Western Europe, has been singled out as the external factor that systematically caps export surges from Japan, thereby providing special incentives to the first-tier NIEs to move into some of Japan’s export-oriented industries. As will be discussed in the paper, this is partly related to the issue of “self-containedness” of the FG paradigm. At any rate, it is thought that FDI from Japan ostensibly aids in the replication of the Japanese development pattern.

II. COMPARISON BETWEEN DIFFERENT VERSIONS OF THE FLYING GEESSE PARADIGM

Contrast between Akamatsu’s FG paradigm and its modern counterpart can be seen clearly in the following areas: (A) the generic distinctions of analysis (central aims of analysis, “stages” in the product-cycle analysis, and initiatives of industrial upgrading); (B) the principal channels of technology transfer; and (C) stability of regional hierarchy. Let us again be reminded here that Akamatsu’s own framework evolved considerably over time and came to resemble the contemporary version of the paradigm.

A. The generic distinctions of analysis

Central aims of analysis: Nation capacity-building vs regional catching-up. Akamatsu’s original aim was to present an analysis of Japan’s industrialization experiences, i.e., its catching-up process, as reflected in its trade relations with the West. His analysis, particularly in his earlier studies, focused on the developmental aspect of one specific industry, namely the cotton industry of Japan (Korhonen, 1994a and 1994b). Then he looked into the possibility of creating a general framework of analysis for structural changes in late industrialization by using Japan’s experiences as a model. But this framework is “nation-specific” instead of “region-specific”. While it may deal with the question of the replicability of the Japanese “national industrial development” to other non-Western economies, it concerns itself with neither the geographical location of the national economy (as was done in a gravity model of trade), nor the formation of an “integrated economic sphere” among regionally clustered national economies. On the other hand, the contemporary FG paradigm theorists explicitly uphold a framework of “consecutive catching-up efforts” for a specific geographical group in East Asia.¹² Contemporary theorists, mostly those from Asia, emphasize cooperative policies in the light of dynamic changes in the division of labour in the East Asian region by means of trade and TNCs’ activities (Kwan, 1994, and Yamazawa, 1996). Needless to say, Vernon’s PC theory, which is based on a microeconomic analysis of corporate behaviour regarding production and marketing, has little to do with the notion of national capacity-building and regional catching-up.

“Stages” in the product-cycle analysis. Akamatsu’s framework, which focuses on a catching-up national economy, consists of *three stages*: (1) import, (2) import-substituting production, and (3) export for each product group. (In his later framework, the concept of “reverse import” was added

¹² We have not witnessed any serious attempt to apply the FG paradigm to any other developing region, with a single exception of the theorization of the Pan-Pacific regional integration.

as the fourth stage.) As pointed out earlier, he refers to the Western economies as the leaders, and to the Asian economies, including Japan, as followers. Vernon's "firm-centred" PC theory, which reflects the strategic viewpoint of large leader firms, also consists of *three stages*: (1) production, (2) export, and (3) import (or "reverse import"). By combining Akamatsu's paradigm and Vernon's PC theory, the modern FG paradigm presents a framework which consists of *four stages*: (1) import, (2) production, (3) export, and (4) reverse import. Unlike Akamatsu,¹³ contemporary theorists see Japan as a leader economy (occasionally together with the United States), or the leader in the East Asian region. According to the modern FG paradigm, Japan (and the United States when it is included in the analytical framework) usually faces stages from (2) to (4) for each product in intra-regional trade, while its neighbours, those from (1) to (3), and possibly (4).

Initiatives of industrial upgrading. If international relocation of industries were to occur, Akamatsu believed that it would happen either at the initiative of either foreign capital, or local capital, or a combination of both.¹⁴ In his view, the catching-up process is a reflection of the follower economy's (Japan) development aspiration (thus, "bottom-up" rather than "top-down"), inspired mainly by the demonstration effects of superior consumer goods from abroad. The Western leader economies being mercantilists and scarcely concerned with the "genuine" development of catching-up economies, non-Western followers would need to muster up the motivation and initiative that are essential for their own development.¹⁵ Contemporary theorists (particularly Japanese researchers) generally regard all economies involved in a collective catching-up process as a group of calculating actors who surrender rationally some formerly competitive industries and relocate them to follower economies. Therefore, a new element of the modern FG paradigm is that industrial restructuring is a "top-down" rather than "bottom-up" phenomenon in the East Asian hierarchy. This is why the role of Japan as the regional economic leader is seen to be particularly important for East Asia.¹⁶ In the late 1980s, the Japanese Government, particularly the Ministry of International Trade and Industry (MITI) formulated the East Asian regional framework, with Japan's official development assistance (ODA) as a supplementary measure for augmenting the infrastructure and human resource development in aid-recipient Asian economies, thereby facilitating the region-wide restructuring process. It seems that, by and large, modern theorists tend to view the private sector in developing economies as being able to instinctively gravitate into industries where expanded output entails technical change and increased productivity.

¹³As the first among the Asians, Japan made an impressive progress since the late 19th century, perhaps to the position of a leader country by the very early period of the 20th century. Interestingly enough, however, even during World War II, Akamatsu reportedly did not consider Japan as a real leader (Korhonen, 1994a).

¹⁴Akamatsu may not have regarded FDI as an effective channel of technology transfer. In Akamatsu's time, the magnitude of FDI, except for "domestic" investment by colonizers (as had been done by the Japanese Imperial Government and firms in their overseas territories), was by far smaller than trade.

¹⁵Akamatsu could have elaborated a great deal on the role of the State in facilitating technology capacity building, but we fail to find any reference to it in his English writings, i.e., Akamatsu 1961 and 1962.

¹⁶As was explained, Akamatsu's research was a case study of Japan's catching-up process. Thus, he neither elaborated the way of replicating Japan's process in non-Japanese Asian economies, nor articulated the tasks of Japan in the replicating process. This was because these matters were not his principal concerns, and perhaps more importantly, because there were long prevailing anti-Japanese sentiments in the region after World War II. On the other hand, the modern FG paradigm, a Japan-centric framework, assigns the region's giant with supply-side and demand-side tasks. As for the supply-side task, Japanese firms are expected to provide physical and investment capital to its neighbours, so as to facilitate restructuring of the manufacturing sector of its neighbours. As for the demand side, the Japanese economy is expected to be a major export outlet for labour-intensive exports from them. As the regional hierarchy has increased its horizontal layers, the relatively high positioned economies, such as the first-tier NIEs, are also expected to facilitate technological transfer to and deepen their trade relations with relatively less developed economies.

B. The principal channels of technology transfer

Akamatsu sees the demonstration effects of trade, more specifically the effects of imported manufactured products on the catching-up sentiments of the public (including the “animal spirit” of entrepreneurs) as the most dominant channel of technology transfer to the importing economies. As was explained earlier, being either much cheaper or of a modern type vis-à-vis local counterparts, imported goods are likely to drive many local firms out of business and impoverish many manufactured segments in the importing economies. It is not clear, however, how the impoverished local firms could overcome their overwhelmingly unfavourable situation. Akamatsu neither presents any systematic analysis of the role of large firms (as was done by Vernon) in explaining the inter-economy sequencing of industrial activities, nor elaborates the role of the State to cope with external threats. Again, Akamatsu does not concern himself with the question of whether industrial production of imported products will start largely with local capital, as in Japan and the first-tier NIEs (except Singapore, and to a lesser extent Hong Kong (China)), or considerably with foreign capital as in the second-tier NIEs, or a combination of the two.

The modern FG paradigm explicitly envisages that TNCs are crucial channels for technology transfer. For instance, Ozawa (1995:2) describes these firms as “agents of comparative-advantage recycling”. Of course, non-equity business arrangements, including licensing and sub-contracting and other arrangements, can also be added as important channels for production and technology transfer. Industrial relocations within East Asia have been aided by TNCs from Japan and the first-tier NIEs. They have been active with the intention of using developing neighbours as potential export platforms directed not only to their own and/or local markets but also to third-party markets (Jomo et al., 1997). In addition, technical assistance administered by the Japanese Government to its East Asian neighbours has also facilitated the region-wide industrial transformation à la FG paradigm.¹⁷

C. The stability of regional hierarchy

In the post-war period, Akamatsu began to develop the FP paradigm in the East Asian regional context. In his view, the relative position of FG members in the hierarchy is *not* permanently fixed, as catching-up economies may advance to challenge the order. Akamatsu (1962:6) claimed that “heterogeneity can be complementary and co-accelerative, while homogeneity can be substitute and competitive”. Consequently, the intensified competition due to catching-up efforts of follower economies must be overcome by continued technological innovations in forerunner economies, so as to *heterogenize* (meaning “to be ahead”) their own economies vis-à-vis the followers’. As for the nature and pace of progress occurring in the forerunner and follower economies, Akamatsu (1962:18) argued:

These countries ... do not necessarily go forward at the same speed in their development of a wild-geese-flying pattern, nor do they always make gradual progress, but they are at times dormant and at other times make leaping advances. That the economies of advanced countries are sometimes stagnant and sometimes make leaping advances causes the economies of less-advanced countries to make similar movements. Some of the less-advanced countries always remains in a stagnant state falling more and more behind in the wild-geese-flying order, while others, like Japan, joined the ranks of the advanced countries by making rapid advances and are strengthening a high degree of homogenization.

¹⁷ For further discussions on Japanese ODA policy for regional development, see Arase (1995).

With the recognition that there is no built-in device for maintaining the ranking of national economies, Akamatsu accepted that the hierarchy of leader-follower relations could be *unstable*. Obviously, this reflects the catching-up (leaping-forward) experience of Japan from the late 19th century onward.

Akamatsu's model characterized the nature of interactions among economies of different stages of development to be competitive, where new industries of a follower economy may bump into obsolescent industries of a forerunner economy. Akamatsu did *not* necessarily perceive that efforts by individual catching-up economies would lead to international and regional integration. In other words, his dialectical analysis, being conflict-prone, may not present a suitable framework for explaining international and regional integration. Let us note again that his framework, particularly his earlier one, is based on bilateral relations between a single leader(s) (the United States and other Western economies) and a single follower (Japan), instead of regional integrative relations among many.

With an overly *harmonious* picture of multilateral relations, the modern FG paradigm accepts the view that the growing market-based interdependence in the East Asian region will lead to the internally harmonized formation of an economic bloc (though not necessarily of an "exclusive" or "isolationist" type) to counter the West European and North American blocs. Contemporary theorists usually cluster national economies into several hierarchically piled layers with, say, Japan, by itself on the topmost level, followed by the first-tier NIEs, the second-tier NIEs, and other national economies in East Asia. They also see this regional order as collectively dynamic but internally stable. For example, the expressions used by Ozawa (1995) to characterize the East Asian development process – "the flying-geese formation of tandem development", "a concatenated process of economic progress", "a phenomenon of clustered growth", and the like all denote a great deal of harmony. As will be discussed further in this paper, however, there are reasons for doubting such a harmonious connotation in East Asian dynamics.

III. CRITIQUE OF THE FLYING GEESE PARADIGM

So far only a few researchers, from critical perspectives somewhat similar to the dependency school (for instance, Bernard and Ravenhill (1995), Burkett and Hart-Landsberg (1998), Ozawa (2001), Rasiah (1998) and Rowthorn (1996)), have attempted to assess the validity of the FG paradigm. It is our hope that the attempt made by this paper will contribute to the further enrichment of the discussions on the East Asian development experience.

The 10 issue areas¹⁸ that we dwell on in the following pages are: (A) the ambiguity on the technology transfer mechanism; (B) the "reverse import" based on the perceived maturation pattern of production and technology; (C) the general identification between a product and a national economy; (D) the question of contrasting catching up processes; (E) the IS-EP (import substitution-export promotion) sequence; (F) the question of self-containedness of the paradigm; (G) the question of China and overseas Chinese; (H) the presumed diffusion of Japanese-style business practices and institutions; (I) the prescriptive value for regional integration; and (J) stability in regional hierarchy.

¹⁸ As there are many differences between Akamatsu's original and the modern FG paradigms, these issues may apply to either one of the two or both; because many of the issue areas are partly related to one another, the following discussions occasionally contain cross-references.

A. The ambiguity on the technology transfer mechanism

According to Akamatsu's original framework, the demonstration effects of trade, more specifically, the demonstration effects of imported manufactured goods, can effectively activate the sense of urgency to catch up (or instigate the "animal spirit") among local producers. Yet, it remains unclear how local firms that have been impoverished due to the competitive pressures of imports could overcome their overwhelmingly unfavourable situation. While imported products may expand consumer tastes and local firms may find new niches, the negative effects of competition caused by imported products can be so devastating that local firms may be totally crowded from the market, thus leading to the monopolization by imported products. In other words, when the local firms are totally eliminated and/or the local market is extremely small and unable to create any room for local firms, the question of who in the local market can pursue this possibility arises.

Because of the lack of clarification in Akamatsu's writings on the mechanism of technology transfer through trade (apart from the aforementioned, ambiguous reference to demonstration effects), all sorts of speculations may be possible. The mechanism of "reverse engineering" (i.e., dismantling the imported manufactured products and learning the structure, composition and other mechanics in producing them) may be a good possibility.

The modern FG paradigm explicitly places an emphasis on TNCs (particularly through Japanese FDI) as the principal providers of technology (see note 11). However, it is generally understood that technology transfer (or spillovers) does not automatically occur for all cases of FDI. In fact, the rapidly growing literature of empirical analysis on productivity spillovers on FDI has found relatively limited positive effects.¹⁹ It is hypothesized, and sometimes empirically demonstrated that spillovers will be positively associated with the level of competition (which pushes firms to adopt improved technology) and negatively associated with the productivity gap between foreign and domestic firms, on the assumption that a very large gap renders the technology absorption by domestic firms more difficult (Hill and Athukorala, 1998:42). This hypothesis justifies the layer-by-layer "cascading style" FDI flows, meaning that the destination of FDI for producing each product shifts sequentially from first-tier NIEs, to second-tier NIEs, and then to China. However, many observers regard the situation of the second-tier NIEs and China as a classic case of enclave, a shallow industrialization where TNCs tend to take advantage of cheap and unskilled labour for assembly activities, while not providing firm-specific technology to the local economies as a whole.

B. The "reverse import" based on perceived maturation pattern of production and technology

The modern FG paradigms, as well as Vernon's PC theory, predict that in the last stage of the life cycle for each product, the exporting economy/firm becomes less cost competitive and begins to exit from its market, leaving domestic demand to be met partly, or later perhaps fully, by imports from overseas locations where production has been shifted. One key assumption here, although not explicitly framed, is that there is a definitive maturation pattern in producing a product such that

¹⁹ An analysis of the existence of spillovers is usually undertaken in an econometric framework in which labour productivity or total factor productivity of domestic firms is regressed on a number of independent variables assumed to affect productivity. To measure intra-sectoral spillovers, researchers include an independent variable that proxies the presence of foreign firms in the sector, usually calculated as the share of employment or sales in these firms over total industry employment. If the regression analysis gives a positive and statistically significant estimate of the coefficient on the foreign presence variable, this is taken as evidence that spillovers have occurred from FDI to domestic firms. For a recent literature survey, see Gorg and Greenaway (2001).

efficiency gains in the production process sooner or later slow down and eventually stop. In other words, the life cycle of a product is meant to be a life cycle of its production process.

If the FG paradigm is to remain valid, the international relocation of production for a particular product from a national economy must coincide with the gradual reduction of its domestic production. Meanwhile, we witness continuous product improvements and process innovations for some manufactured products in the original exporting economies. This parallelism can be illustrated, for example, by Japanese outward FDI in East Asia, particularly in the second-tier NIEs, for final assembly which cover many products – electric and electronics, automotive, and other items. Such outward FDI has resulted in the further maturation of the products in question, rather than the disruption of their production, in Japan.²⁰

This overall situation tends to reduce the efficacy of imitation via simple “reverse engineering” as a catch-up strategy. Increasing technological complexity – together with a growing reluctance on the part of many firms to facilitate technology transfer – has produced a greater barrier to entry in the form of higher start-up costs and know-how requirements, steeper learning curves, and intensified specialization. We witness a heavy external dependence in East Asian economies, particularly the second-tier NIEs and China, Japan and to a lesser extent the first-tier NIEs, for the supply of components and machinery. This dependence indicates neither the demise of production in Japan and the first-tier NIEs, nor the genuine replication of their industrial trajectory among neighbours (Bernard and Ravenhill, 1994). But this is certainly a bit of overstatement. Industrial hollowing-out in the Japanese economy, measured in terms of the share of the manufacturing in GDP, is a distinctive trend in the post-bubble period since the beginning of the 1990s. (For policy challenges Japan has been faced with in the period of “post-industrial transformation”, see Akyuz, 1996.)

The intra-regional FDI in East Asia has been induced partly by the strategy of the TNCs in Japan and the first-tier NIEs to overcome protectionist trade measures in third-party markets (namely, the North American and West European markets). Of course, the use of overseas production sites for strategic marketing purposes would not exclude the seemingly ongoing, region-wide catching-up process. Japan’s unwillingness – and for that matter, that of the first-tier NIEs as well – to play the demand-side role (i.e., to assume itself to be a “significant” export market) does not deny region-wide industrial upgrading, although some researchers held a strongly contrary view (for example, Rasiah, 1998; Rowthorn, 1996). Therefore, the limited occurrence of reverse import can be seen as a sign that Japan and the first-tier NIEs are becoming less, rather than more, integrated into the East Asian regional integration.²¹ The original exporter’s state may be pressured to raise trade barriers, so as to protect the declining industries. When industrial restructuring in that economy is not taking place smoothly, this type of “senile industry protection”, as opposed to that of familiar infant industry protection, can be a very formidable obstacle to market access for catching-up economies. Hence, for

²⁰ Of course, the production of some narrowly defined product groups, such as black-and-white television sets, transistor radios and the like, have been totally shifted abroad. With the more sophisticated production processes, together with more complex embodied technology, improved products are being introduced in increasing rapidity.

²¹ The heavy dependence of the East Asian economies on extra-regional markets, i.e., the United States market, may indicate the industrial weakening of the extra-regional industries, rather than that of the Japanese industries, as the products of the former are more extensively replaced than those of the latter by East Asian products. However, this argument has weakened during the 1990s when Japan went through a prolonged recession, while the United States economy made a remarkable recovery and continued a period of sustained growth. Bernard and Ravenhill argue that rather than replicating Japan’s development experiences in the region, the diffusion of manufacturing has increasingly been characterized by shifting hierarchical networks of production linked both backward to Japanese innovations and forward to the United States market for finished goods (Bernard and Ravenhill, 1995:172).

various reasons, the exports of the original importers may largely go to third-party markets, and the original exporter now may simply streamline operations and concentrate on its own domestic market. We can point out some other factors which affect the transaction costs of shipping that may contribute to blocking reverse importing. For instance, some bulky manufactured products may not be exported directly to the distant market of the original exporter, and end up being shipped to nearby, third markets.

Let us also consider the neglected aspect of demand. The FG paradigm assumes that consumers' demand for manufactured products is static. However, reality is far from this assumption. It is difficult to anticipate that consumers of the original exporter country who are so used to state-of-the-art products would be satisfied with products that are produced elsewhere just because they are cheaper. The products whose production has been relocated abroad are often those for which consumers' demand has declined. For example, can we expect that the Japanese customers remain interested in transistor radios, black-and-white TV sets, low-quality word-processor, etc. just because they can be imported cheaply?

C. The general identification between a product/industry and a national economy

With the "national economy" as a unit of analysis, Akamatsu's FG paradigm, as well as the PC theory, looks into economic activities within that unit, as well as its trade flows with others. The emergence of regional production networks in the modern high-tech industries undermines such a notion of the PC theory that equates, at each moment of time, the production of a particular product with the "national" stage of development. But the continued innovation in production process and introduction of new types for existing products make this argument less convincing. Furthermore, the rising importance of intra-firm trade of intermediate goods means that trade has occurred increasingly between different parts (subsidiaries) within large firms, by dividing up the production process of a particular product into several stages and relocating only some – final assembly, for instance – abroad.

More often than not, these firms act with the intention of *expanding* rather than *relocating* the production and marketing activities. Regional integration in East Asia is characterized by the continued dependence of foreign subsidiaries on capital as well as technology and component inputs from abroad, without developing linkages with local suppliers. The situation indeed casts doubt about the relevance of the FG paradigm. Consequently, the character of trade has considerably altered (Evans, 1997:66):

Rather than being an exchange of goods between domestic production systems, trade is increasingly a flow of goods within production networks that are organized globally rather than nationally. Commodities are created through the integration of production processes performed in a multiplicity of national territories. Whether any given territory is included in global production networks or excluded from them depends on the decisions of private actors. States can try to make their territories attractive, but they cannot dictate the structure of good production network.

Indeed, export-oriented manufacturing in the second-tier NIEs relies on foreign technology and components, and is considerably undertaken by subsidiaries of foreign firms (Rasiah, 1998; Yoshihara, 1988). In relative terms, national economies are producing and exporting increasingly "incomplete" products than before, and the degree of "incompleteness" is higher in the more sophisticated products. Let us note, however, that "incompleteness" is an arbitrary concept. Certain "complete" products – for example, containers for beverages, automobiles tyres, toners for printers, etc. – can still be used as parts and inputs for another product.

D. The question of contrasting catching-up processes

The FG paradigm is based on the assumption of linearity of industrial restructuring of all economies. For instance, the Japanese industries of the past are the same as those of the first-tier NIEs of today, and those of the second-tier NIEs and China of the future. The burgeoning manufacturing activities in the second-tier NIEs and China are thought to have resulted from replicating some parts of the experiences of their forerunners – Japan and the first-tier NIEs. As pointed out earlier, however, the export-oriented new manufacturing activities in the second-tier NIEs and China are not built on solid and extensive import-substituting industrialization. In other words, from the very start, the production of some products by local subsidiaries of foreign firms has been dominantly export-oriented, rather than local market-oriented. Therefore, the export composition of the second-tier NIEs and China does not reveal the stage of their industrial sophistication, or the prior development of local demand for the products included in the composition. Furthermore, as theorists argue, many finished products contain relatively small amounts of value-added (the large intermediate components from abroad) (Rasiah, 1998; UNCTAD, 2002); and one important reason for the small amount of value-added is the well-known practice of intra-firm transfer pricing.²²

Modern FG paradigm theorists are hardly concerned with the fact that among the first-tier NIEs there are contrasting differences in their development path: between, for example, the Republic of Korea and Taiwan Province of China on the one hand; and Hong Kong (China) and Singapore on the other. In this group, the Republic of Korea and Taiwan Province of China are perhaps more competitive than complementary vis-à-vis Japan, whereas Hong Kong (China) and Singapore are more complementary than competitive vis-à-vis Japan. According to Cronin (1992:30):

Hong Kong and Singapore serve primarily as production bases for exports to the third countries, especially the United States. Both run very large trade deficits with Japan. Because of the more broadly-based nature of their economies, Taiwan and South Korea ... engage in a more extensive two-way trade with Japan. Ironically, due to a greater sense of rivalry with Japan, the imbalances are felt more keenly and tended to sour relations with Japan.

E. The IS-EP (import substitution-export promotion) sequence

Akamatsu and modern FG paradigm theorists share the belief that in developing economies, successful industrialization entails IS efforts to build their own productive and technology base prior to the take-off of EP industrialization. Japan had already built a strong domestic industrial foundation prior to its take-off in the 1960s. However, even now the frontier industries in the first-tier NIEs are marked by a considerable dependence on imported technology, primarily from Japan and the United States. According to some observers, the incompleteness of IS industrialization is much more pronounced in the second-tier NIEs and China (Rasiah, 1998; Yoshihara, 1988).²³

²² Transfer pricing activities reflect the strategy to maximize the corporate-wide profits by means of overcharging or undercharging intermediate products traded between corporate headquarters and overseas subsidiaries, as well as among the latter establishments. The primary factor that induces transfer pricing is the differences in taxation among different locations. However, the on-going trend of liberalization, including tax concessions favouring foreign firms, has seemingly reduced the imperatives of transfer pricing activities on the part of corporate headquarters.

²³ The case in point is the automobile industry, on which Yoshihara notes that most of the major components are supplied by Japanese firms, some of which are produced locally under their technical supervision: “The South-East Asian capitalists are essentially distributors of Japanese cars, with the difference that they have assembling plants. Technologically, however, they are almost 100 per cent dependent on their Japanese licensors, and under the present set up, it would be impossible for them to become technologically independent and start exporting their own products. Their technological dependency is not temporary but, being structural, semi-permanent” (Yoshihara, 1988:112).

Many East Asian economies, particularly the second-tier NIEs and perhaps China, had not built a broad industrial foundation by the time they entered into the export-led industrialization by liberalizing their FDI regime. As a result, foreign firms have tended to build the local production capacity on the basis of their own finance and management, together with imported capital and intermediate goods. The availability of convenient industrial enclaves (for instance, in the form of EPZs), together with cheap labour, rather than a solid, overall industrial foundation, often suffices to induce the emergence of only enclaves of industrial activities (Rasiah, 1998).

The incompleteness of IS industrialization, particularly in the area of consumer products, also has something to do with domestic demand. As was discussed, the domestic production of consumer products is initially directed at the local market. When the local demand is met, then export will commence. However, the reality of East Asia does not always follow this pattern. Some TNCs begin overseas operations with the intention of selling their products *not* in local, but in third-party markets. In this situation, the three-stage import-production-export sequence is truncated into the two-stage production-export sequence. Again, the absence of import as an initial stage would mean that import substitution as such for some consumer products does not exist.

F. The question of self-containedness of the FG paradigm

Whether justified or not, Japan and the first-tier NIEs have not fully played the demand-side role as forerunners during the important initial stage of development of its neighbours. Japan is the clearest case in point.

Over the last decade the United States has absorbed well over 80 per cent of all manufactured goods from Mexico. In the case of Spain, the proportion of manufactured exports going to the European Union has been increasing and is now almost 70 per cent. These figures are many times greater than the corresponding figures for East Asian exports to Japan. This brings out a significant asymmetry in Asian trading relations which is absent in the case of Europe and North America (Rowthorn, 1996:4).

The regionalization of East Asia, therefore, has not been self-contained. Technology, capital and intermediate products in the region have been outsourced dominantly from Japan, while final products are exported considerably to third-party markets outside.²⁴ The success of the export-led growth of East Asian economies has been attributed to, among others, the openness and absorption of exports by the United States economy. Historically, the role of the United States was important in setting up this triangular trade pattern.

American policy in East Asia was to build up an integrated stable economic system with Japan acting as the region's "economic workshop". With the loss of Japan's traditional markets in China and Korea, the only alternative was to open new markets for Japanese goods in Southeast Asia. Washington promoted a triangular economic division of trade between the United States, Japan and Southeast Asia in which America would provide high technology and capital goods, Japan intermediate and consumer goods and Southeast Asia raw material and energy (Nester, 1992:121).

The rapid growth in exports and national income of many East Asian economies during the last few decades had a lot to do with the huge United States trade deficit. It is the political pressure on Japan

²⁴Arguably, Japan's bilateral trade surplus vis-à-vis its Asian neighbours are not totally due to its lack of willingness to import. It is often the Asian economies that do not wish to depend too much on Japan (for export). Amsden (1993) explains that to reduce such dependence, some East Asian economies, like the Republic of Korea, have begun to look farther afield than either Japan or the United States – towards East Europe, China and the Russian Federation.

and the first-tier NIEs (particularly the Republic of Korea and Taiwan Province of China) to reduce their bilateral trade surplus with the United States that has caused a direct impact on the regional pattern of trade. Given the imperative to redress the trade imbalance in the United States, regional economies have perceived the need for promoting a smooth transition to a more viable situation.

As long as major forerunners' "reverse import" in intra-regional trade does not grow rapidly, the United States market must remain indispensable. It is feared that any possible move towards bilateralism and protectionism by the United States would tend to disrupt such EP growth pattern of the region. This is probably an important reason why some East Asian economies, such as Singapore, have been more willing than others to include the United States in a "regional" grouping of the Asia Pacific Economic Cooperation (APEC). Optimists may argue that the gradually expanding trade regime of the World Trade Organization (WTO) may prove the aforementioned concern to be unfounded. At any rate, as long as East Asian economies can continue the EP strategy by successfully competing with major economies, the FG paradigm *cannot* be highly self-contained in its application to the East Asian region, and as a result these economies will remain potentially vulnerable to external shocks.

G. The question of China and overseas Chinese

Many observers regard Japanese TNCs as agents of central importance in creating regional production networks and integration in East Asia. However, the ethnic Chinese business networks have also become an important integrative factor. According to Peng (2000:186):

East Asian economies that have obtained rapid economic growth with the help of the RPNs [regional production networks] close production ties have been established among East Asian economies, albeit with a high dependence on Japan. However, not all the East Asian economies depended on Japan passively. Some East Asian economies, especially these capitalist Chinese economies, have become challengers to the Japanese dominance in the information age.

China is a vast and diverse country with active coastal cities of a scale smaller than that of Hong Kong (China) or Singapore, and a massive hinterland. Therefore, it is generally thought that although the share of trade in GDP in China has been rapidly growing, its geographical size and domestic diversity will make the Chinese economy increasingly more inward-looking (or more self-sufficient) than most in the region. When asked whether it is appropriate to regard China as a member of the Asian FG formation, one observer remarks "a huge bird flying side by side with the various layers of flying geese at various levels of industrial production. In some areas China is competing or can potentially compete with Japan and the NIEs. On the other hand, China is also providing the downstream labour-intensive products in competition with the ASEAN-4. South Asia is a group in a similar situation as China" (Chan, 1993:16).

While many firms of overseas Chinese – the core of the private sector in South-East Asia – have contributed to the development and rapid growth of the region, they may still be regarded as a potentially *destabilizing* factor. This may be because overseas Chinese could choose to benefit from the historical and special Chinese linkages within the region for reasons of mutual advantage, thereby excluding others. At any rate, smaller East Asian economies may feel uneasy about the increasing economic weight of the Chinese economy in the region, which can possibly decelerate the pace of economic integration. Optimists, however, have argued that the economic success of East Asia has done much to alleviate such a concern.

H. The presumed diffusion of Japanese-style business practices and institutions

During the heyday of the FG paradigm, Japanese bureaucrats used the FG paradigm as a “prescription” (Bernard and Ravenhill, 1995:184):

It is necessary that what Japan used to do should be done by the Asian NIEs, and what the Asian NIEs used to do should be done by ASEAN countries.

However, with given different national backgrounds, the dynamics in industrial restructuring should vary among individual national economies. Without much attention being paid to such differences, the replication of the Japanese manufacturing method – including the production process of lean and mean “Toyotaism” (“just-in-time” operation) as opposed to “Fordism” (“just-in-case” operation)²⁵ – may not only create new problems rather than solve existing ones, but also forcefully integrate local subsidiaries into the externally-controlled business imperatives rather than retain and develop local, traditional operations.

Some of the policy measures of the Japanese State, no matter how successful they have been to its economy, may not be favourably seen by its firms venturing abroad if similar measures are implemented there. For instance, the past policy of Japan (as well as that of the Republic of Korea and Taiwan Province of China, for that matter) to keep inward FDI at bay would not be what its firms would like to face in host economies in South-East Asia. The adoption of Japanese-style general trading companies (GTCs) has shown different degrees of success among regional economies. For instance, the Republic of Korea’s GTCs grew impressively, expanding the economy’s exports, while assembling large diverse business conglomerates. However, the efforts of Taiwan Province of China to graft Japanese-style GTCs to its economy largely failed.²⁶ Subcontracting arrangements (typically involving a small group of large prime contractors) to which Japan’s success in manufacturing has owed much, have not been developed evenly in the region. Perhaps, with the exception of the Republic of Korea, such large sub-contractors are only emerging in a relatively small number of industries. Therefore, such business arrangements may not be viable in the region as a whole. Doner (1993:194–197) argues that subcontracting tends to grow when prime contractors experience labour market rigidity and are unable to shift workers among assignments and extend the workday. In East Asia, labour organizations are weak and there is little ostensible need to rely on subcontractors.

I. The prescriptive value for regional integration

The modern FG paradigm postulates that gradually transforming industrial activities in East Asia, the collective catch-up, tends to strengthen the intra-regional linkage, and thus promoting integration. Evidence of increased economic transactions in the region is said to reflect the irreversible trend toward the greater integration. Intra-regional trade in East Asia has recently increased dramatically in absolute terms. It has also increased in relative terms, i.e., as a share of the total trade, though the trend was temporarily interrupted during the recent East Asian crisis. Furthermore, the prospects for a

²⁵ For a concise, but informative description of Toyotaism and Fordism (and Taylorism), see Ozawa (1995).

²⁶ In fact, by the mid-1980s, Japanese GTCs, not those of Taiwan Province of China, dominated the foreign trade of Taiwan Province of China. Several factors account for these differences. In the Republic of Korea, Japanese GTCs were excluded until the 1960s, and GTCs of the Republic of Korea have benefited not only from the policy support of the State but also from financial support and a reliable source of export products from large business conglomerates (*Chaebals*). In Taiwan Province of China, Japanese GTCs had free entry to the economy, and control some 50 per cent of its trade. Taiwan Province of China itself did little to promote the linkage of business groups and local GTCs due to its own fear of business concentration (Doner, 1993:193).

greater regional integration has been fortified, for better or worse, by the fact that the world economy has begun to exhibit the trend of regionalization based on trading blocs.

Japan and the first-tier NIEs' general failures (perhaps with the exception of Singapore) to import increasingly from their "lower-ranking" neighbours, particularly the second-tier NIEs, have resulted in their bilateral trade surplus with them.²⁷ Furthermore, while trade transactions among the first-tier NIEs, among the second-tier NIEs and between the two groups, have grown, they have still remained small in comparison with their extra-regional trade. In addition, regional integration does not progress without creating various tensions among States. It would seem that the recent East Asian crisis has intensified this condition. At any rate, the tension between the territorially based "inter-state" system and the "globalized" networks of production and exchange has generated a dynamic interplay of politics and economics that is exercising a profound influence on the structure of the East Asian political economy as tensions rise over imbalances in international trade (Bernard and Ravenhill, 1994:172).

J. Stability in regional hierarchy

In the market-based competition, the stability of the regional hierarchy may have much to do with competition among firms. East Asian economies in general have their increased interdependence based on production linkages, as much as on traditional trade linkages. However, between domestic producers and foreign investors, the relations are often the form of "negotiated confrontation" (Kregel, 1997) rather than "circulating or recycling comparative advantage" (Ozawa, 1995).

In order to maintain the regional tier-by-tier, trickle-down effects, relocations of productive activities should occur in a proper sequence, say, from Japan to the first-tier NIEs, from the first-tier NIEs to the second-tier NIEs, and from second-tier NIEs to China. In this sequence, the TNCs in the forerunner economies relocate obsolescent industries to their immediate follower economies which, before long, will also come to view these industries to be obsolescent as well. As a result, the intensity of competition is likely to increase among the growing number of East Asian firms that wish to see their operations expand on a regional scale. The original investors from a forerunner economy (say, Japanese firms) and those from a follower economy (say, firms from the Republic of Korea) are likely to scramble over their common follower countries (say, Malaysia). In the end, investors from other national economies may join the move to relocate their obsolescent plants. This move could cause an increased investor density in the remaining markets that could become the dumping grounds for obsolescent industrial activities.²⁸

The modern FG paradigm presents no explanation as to why a national economy ought to refrain from disturbing the regional hierarchy. It is indeed plausible that some economies can be caught up by

²⁷ This does not apply to China's exports to Japan and the first-tier NIEs. In particular, the spectacular growth of China's exports to Hong Kong (China) over the last two decades has been highlighted as a manifestation of the market-led (and now political as well) integration between the two. Yet, the integration between the two is dominantly more in the sphere of exchange, which is exaggerated, rather than in the sphere of production. It needs to be noted that "[Those exports] can, alone, account for virtually the entire recorded increase in the share of intra-regional trade over the last decade; but three-quarters of those exports are re-exported by Hong Kong, mostly to markets outside the region, which means that there is a problem of double accounting that artificially inflates the recorded ratio on intra-regional to extra-regional trade" (Oman, 1994:79).

²⁸ Three possible solutions may come to mind. The first is to simply expand the membership (or increasing the number of geese flying together) by adding new ones at the bottom so as to give a more space to investors. The second is to improve the market conditions of the existing members or to intensify the exploitation of the market. The third is to get out from the existing group, and go alone. Among the non-Japanese Asian economies, the third option may be most popular among the Republic of Korea investors who, in terms of destination, have invested most extensively than others.

others (thus changing the order of hierarchy) or, even worse, are ejected from the regionally clustered development process. In applying the hegemonic stability theory to the East Asian region, we can hypothesize that this type of instability-inducing incident could be avoided if Japan's economic behaviour become hegemonic and maintain "regional stability" by means of regulating the speed of transfer of technology in the region.²⁹

In this regard, China is a critical factor that could increase the possibility of instability in the regional hierarchy. What would happen if all forerunner economies in the region decide to bypass the immediate followers and go straight to China in order to take advantage of its huge development potential? (And it seems that this has been occurring since the early 1990s, particularly after the 1994 devaluation of the Chinese currency.) Foreign investors may find it more cost effective to start with China's export processing zones (EPZ) and gradually move west, rather than move around different and much smaller economies in the region. This "China-centric" development pattern has been encouraged by China's central authorities which have become more willing to undertake decentralization and liberalization measures.³⁰ The second-tier NIEs' share in the region's inward FDI has been declining as China has grown to be the region's overwhelming destination of FDI. Consequently, the tier-by-tier, trickle-down effect à la FG paradigm is likely to occur less smoothly.

IV. CONCLUSION: A SUMMARY OF CRITICAL DISCUSSIONS

Recent trade and FDI flows among national economies within East Asia as a whole exhibit increasing interdependence (or arguably integration), although some bilateral trade and investment channels, particularly those involving China, have grown much faster than others. That trade in manufacturing in the region is considerably "intra-firm" trade (indicating the vertical division of labour) means that the PC theory (ultimately the horizontal division of labour) cannot effectively explain the situation. This is because intra-firm trade implies that IS industrialization has *not* fully and widely occurred.

The FG paradigm does *not* stipulate that the regional system ought to be self-contained; instead, it can be compatible with the notion of "open regionalism". In fact, Japan and the first-tier NIEs (particularly the Republic of Korea and Taiwan Province of China) do not absorb manufactured products by large quantities from second-tier NIEs and China. Consequently, most of the economies in the region have been heavily and externally dependent for their export markets. It should be noted that such a reliance on extra-regional markets makes external shocks potentially very damaging to the coherent development pattern postulated by the FG paradigm.

Under the weakening Japanese leadership, China, because of its expanse and diversity and strong business linkages among overseas Chinese within the region, may become a destabilizing factor to the existing regional industrial hierarchy. In this respect China has been likened to a "Black Hole" that

²⁹ Kindleberger (1973) popularized the theory by arguing that the intensity of the Great Depression was due to the fact that the international economic system was rendered unstable by the inability of the United Kingdom and the unwillingness of the United States to hold leadership in maintaining international stability. He highly valued the leadership of the hegemon as the provider of the public good of "systemic stability", and pointed out the uncomfortable resemblance of the absence of hegemonic leadership during the Great Depression with that of the monetary confusion in the early 1970s.

³⁰ China's economic reforms have decentralized economic management to the local provinces and its open policy has encouraged some provinces to strengthen their cross-border ties directly with their neighbouring national economies. Decentralization, therefore, has made it possible for China to practice economic cooperation increasingly on a sub-regional basis (Long, 1995).

absorbs an increasing portion of the total private financial flows (particularly FDI flows) into the region.³¹ This situation could lead to the increasing marginalization of smaller economies in the region. One possible solution to avoid such marginalization would be for these smaller economies to establish integrative linkages with China. In 2001, the ASEAN countries agreed to form a free trade area with China.

Each country within the East Asian economic sphere is eager to upgrade, rather than simply remain content with, its relative status in the regional hierarchy. However, it is difficult to foresee how market forces alone could guarantee harmoniously the region's collective catching-up process. On the contrary, these forces could cause instability to hierarchical cohesiveness. Are we to believe that each national economy should be totally content with its relative position in the regional hierarchy and eager to maintain the regional order? Given the chance of "leap frogging" the regional ranking order, each country is likely to do so, thereby creating instability within the region.

In short, the scheme of the sustained East Asian industrial hierarchy, as postulated by the FG paradigm, may not present fairly justifiable costs and benefits to the region's economies. This may be the main reason why the heyday of the FG paradigm has gone. In this regard, one viable solution for a harmonious collective catching-up process may be the direct intervention of Governments that would systematically establish a regional blueprint for upgrading industries and curb turbulent market forces in the region. Cooperation and coordination among these Governments could help reduce excessive competition in some specific industrial activities among the firms within the region, promote diversification and reduce the risks associated with the private sector initiatives.

³¹ Existing restrictions on non-FDI financial flows in China have effectively prevented it from suffering from the contagion effect of the recent East Asian crisis.

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