

## INTERNATIONAL PRODUCTION/DISTRIBUTION NETWORKS AND INDONESIA

FUKUNARI KIMURA

*First version received April 2004; final version accepted June 2004*

This study examines the industrialization performance of Indonesia through a comparative evaluation with other East Asian economies. While neighboring countries actively formulated international production/distribution networks, Indonesia fell behind in utilizing the benefits of globalizing corporate activities. International production/distribution networks are supported by new economic thought such as fragmentation, agglomeration, and theories about corporate firm; and a policy package of development strategies should be designed to utilize such opportunities. The design of Indonesia's development strategies and "institutions," however, does not conform to the globalizing world because the presence of network-forming foreign companies is not large enough to make them influential "actors." This author argues that the traditional comparative advantage argument for Indonesia's economic development is possibly misleading. Rather, Indonesia must learn the experience of its neighboring countries and introduce foreign companies as new actors to break the old "structure."

### I. INTRODUCTION

WHILE the East Asian economies as a whole have steadily expanded by taking advantage of globalizing corporate activities, industrialization in Indonesia has been relatively stagnant. The negative shock of the Asian financial crisis that broke out at the end of 1997 had the most serious effect on Indonesia. This crisis along with the country's drastic transition of political regime from authoritarianism to democracy pretty much made a temporary digression from fast track of economic growth inevitable. However, a closer comparison of the current status of the Indonesian manufacturing sector with that of other East Asian economies indicates that Indonesia's unsatisfactory performance is not simply due to transitory difficulties but to deeper rooted structural problems in the country's industrialization process before the crisis.

The World Bank's "East Asian Miracle" project listed Indonesia as one of the high performing Asian economies (World Bank 1993). However, since then the East Asian economies have proceeded to a new dimension of economic development. Indonesia's neighbors undertook drastic reform of development strategies in

the latter half of the 1980s and the early 1990s. They maintained the basic framework of the dual track approach, i.e., fostering both import-substituting industries and export-oriented industries at the same time, but shifted the weight to export-oriented industries and started formulating agglomeration by hosting as many foreign companies as possible. Such moves led to the formation of international production/distribution networks in East Asia in the 1990s. Multinational enterprises (MNEs) became essential actors in East Asia's new industrialization strategies.

The Soeharto administration lagged behind in this wave of policy reform and was hit by the Asian crisis at a very preliminary stage of switching development strategies. Behind this delay lay an intertwined structure of initial conditions such as resource endowments and population size, as well as the country's stage of development, and political climate of favoring the *pribumi*. Making things more complicated, institution or policy reform packages transplanted from outside by international organizations and others did not properly mirror the policy transition that the neighboring countries were conducting. The leeway between the structure and the institutions was so narrow that the entry of MNEs was limited, and MNEs did not become actors with enough influence to accelerate industrialization. Without leading actors, institutions for the necessary actors cannot be established, and the old structure can remain intact for a long time.

Despite its lagging, the wave of globalizing corporate activities has also been reaching Indonesia. The machinery manufacturing sector has been growing though at a notably slower speed than in neighboring countries. Some additional effort is now required in order to establish effective institutions that will encourage reform of the structure. Learning from the experience of neighboring countries and understanding the new economic thought dictating international production/distribution networks will be crucial in making up for Indonesia's ten-year delay in economic development.

While Indonesia has its own specific background and conditions, it would be insightful to review what has happened in neighboring countries and consider the relative positioning of Indonesia in the regional setting. An analysis of the economic conditions and politico-economic background can provide useful material for rethinking Indonesia's development strategies, whether it be aimed at trying to catch up with the neighboring countries or Indonesia trying to seek its own way.

The remainder of this paper is as follows: the next section will provide an overview of the formation of international production/distribution networks in East Asia. It will also discuss the new economic thought that supports these networks and the development strategies compatible with this thought. Section III presents a comparative evaluation of the current situation of Indonesia's industrialization and examines the country's economic preconditions as well as its political economy. Section IV seeks to provide a starting point for discussing Indonesia in the post-Soeharto era. The final section sets forth this study's conclusions.

## II. ECONOMIC DEVELOPMENT IN THE COUNTRIES NEIGHBORING INDONESIA

### A. *The Formation of International Production/Distribution Networks*

Unprecedented development of sophisticated vertical production/distribution networks took place in East Asia in the 1990s. Networks grew up in various industries, but most important, both qualitatively and quantitatively, have been those in machinery industries including general machinery, electric machinery, transport equipment, and precision machinery. Machinery industries consist of a large number of multilayered vertical production/distribution steps, and East Asian firms, including Japanese companies, have a competitive edge in managing the chains of vertical production. At the present time the international production/distribution networks in East Asia are distinctive and the most developed in the world in: (i) their significance in the national economy, (ii) their extension into a number of countries in the region, and (iii) the sophistication in their structure which consists of both intra-firm and arm's-length (i.e., inter-firm) transactions.

Figure 1 presents the ratios of the machinery and machine parts trade in each country's total exports and imports. Countries are ordered from left to right by the ratio of the machine parts trade in exports. Major East Asian countries are found on the left-hand side, having high machinery export ratios as well as high machine parts export ratios. China was a bit toward the right-hand side but moved quickly to the left. In other regions, the U.S.-Mexico nexus and the Germany-Hungary/Czech connection seem to present some development of vertical links though they are not as extensive as in East Asia. Japanese MNEs, both large-scale and small/medium-scale, have played a crucial role in formulating such networks. The networks consist not only of intra-firm transactions but also of arm's-length transactions among Japanese firms and firms with different nationalities.<sup>1</sup>

### B. *The Emergence of New Economic Thought*

According to comparative advantage theories in traditional international trade theory, sources of gains from trade come from differences in initial conditions across countries. Comparative advantage is defined as relative costs of producing multiple goods under a fictitious situation of autarky (no trade). The theories predict that labor-intensive goods made by relatively easy technology are produced and exported by less-developed countries (LDCs) while capital-intensive/human-capital-intensive goods made by high technology are produced and exported by developed countries (DCs). The benchmark case of the traditional model includes the goods

<sup>1</sup> See Kimura and Ando (forthcoming) for the FDI pattern of Japanese and U.S. firms investing in East Asia and Latin America.



trade only, and thus the model must be expanded to allow for international capital movements; such expansion can be done relatively easily to the extent that mobile capital is homogeneous and simply substitutes for capital embodied in produced goods.

The traditional theory still holds a certain degree of explanatory power when analyzing the pattern of production and trade in East Asia. International differences in technological capability as well as wage levels are important elements in determining the location of production. However, as sophisticated international production/distribution networks are formulated, some other economic logic beyond the traditional thought becomes increasingly important.

The first point is how to explain the proliferation of the division of labor based on the production process rather than that based on industry, and what would be the economic logic behind this. The newly developed fragmentation theory provides an important clue on this issue.<sup>2</sup>

Fragmentation means decomposing industrial activities originally carried on in one place into several production blocks and locating them separately in remote places. Choosing fragmented locations is motivated by the advantages offered by different locations. Some elements of location advantages are still of the traditional type, such as wage differences, natural resource endowments, and technological capability. In this sense, fragmentation primarily utilizes location differences between DCs and LDCs in order to reduce total production cost.

Another very important source of location advantages is the cost of service links that connect remotely located production blocks. Low service-link cost is crucially important, particularly for location choices based on the production process. Service-link cost consists of transport costs, telecommunication costs, various types of coordination costs, and other costs including the running cost as well as the sunk cost or fixed cost in investment decisions. Unless these costs are low enough, fragmentation does not make sense.

The second point is how to explain the mechanics of industrial agglomeration in East Asia. Agglomeration effects have recently been formulated in the context of the theory of trade and geography.<sup>3</sup> Particularly in the context of East Asia, there are at least two elements that generate positive agglomeration effects. One comes from the nature of service-link costs. Service links often have strong economies of scale. Transport cost strongly depends on infrastructure capacity, particularly in the cases of container transportation and air transportation. Telecommunication ser-

<sup>2</sup> The fragmentation theory has been developed, following the seminal work of Jones and Kierzkowski (1990), as a theoretical framework explaining vertical FDI between DCs and LDCs and the production process division of labor. For theoretical literature and empirical studies, see Arndt and Kierzkowski (2001), Deardorff (2001), and Cheng and Kierzkowski (2001).

<sup>3</sup> Regarding the recent development of the theory of trade and geography, see Krugman (1991, 1995) and Fujita, Krugman, and Venables (1999).

vices are accompanied by very large initial investment while running cost is almost free. More abstract forms of service-link cost, such as transaction cost and investment cost determined by policy environment, address even larger economies of scale. Such economic forces generate patterns of production blocks concentrated in certain locations.

The other element is the flexible choices that MNEs have over location. Fragmentation and concentration in chosen locations are in a sense opposing forces, but MNEs actually utilize both at the same time. Extreme fragmentation is applicable when parts and components have standard specs and their delivery time is not very strict. In such cases, MNEs look for suppliers who have the lowest international prices, which sometimes is even through internet auctions. On the other hand, MNEs prefer suppliers to be nearby when they have to change the specs for parts and components or when just-in-time delivery is crucial. Frequent revision of supply orders, sometimes once a week or even once a day, requires suppliers to be located right next door.

The third point is to explain the sophisticated pattern of intra-firm and arm's-length transactions in international production/distribution networks. Firms make decisions on location and internalization at the same time. What sorts of activities are internalized and what sorts can be outsourced are extremely important in concentrating resources in areas of core competence based on firm-specific assets. The existence of various kinds of potential business partners and the lowered cost of arm's-length transactions provide flexible internalization choices. In East Asia there has been a proliferation of OEM (original equipment manufacturing) contracts as well as the growth of EMS (electronics manufacturing system) firms supported by the development of modulation techniques.

### C. *Great Transformation of Development Strategies*

New economic thought has completely changed the fundamentals of industrial promotion policies. The development of international production/distribution networks has actually been supported by a great transformation of development strategies in the East Asian countries.<sup>4</sup>

Starting in the 1970s, these countries applied the so-called dual track approach, trying to foster both import-substituting and export-oriented industries at the same time. One of the crucial differences from development strategies applied by Japan and the Republic of Korea in the 1950s and 1960s was the active utilization of FDI. However, until the mid-1980s, the attitude toward foreign companies was largely cautious, and the governments tried to keep their activities under full control. Regarding import-substituting FDI, the activities and entry of foreign companies were

<sup>4</sup> Regarding the transformation of development strategies in the Southeast Asian countries, see Kimura (2004) for a detailed discussion.

strictly limited, and various types of performance requirements were imposed in exchange for investment incentives. For export-oriented FDI, activities were often geographically segregated in export-processing zones, and competition as well as interaction with local firms was deliberately avoided. Such development strategies are still more or less applied by LDCs in other parts of the world.

The policy transformation in East Asia began in the latter half of the 1980s or the early 1990s. The initial intention was not the formation of international production/distribution networks. Rather, policymakers simply accepted the active role of MNEs in their development strategies and began trying to attract as much FDI as possible. While maintaining import-substituting strategies for some industries such as automobiles, domestic electric appliances, iron and steel, and petrochemicals, countries began making aggressive utilization of globalizing forces. In order to host export-oriented or network-forming industries, the governments have to enhance the location advantages offered by their countries by employing tariff-related trade policies as well as various measures through multiple policy channels. Foreign companies will invest only when a country provides the best (or the next best in case of hedging purposes) location advantages in the world. This means that the rules of the game have completely changed from the old ones where hosting governments and MNEs bargained over domestic rents in import-substituting industries.

Competition over hosting FDI has become harsh among the East Asian countries. In China, local governments at all levels compete with each other in inviting foreign investors. The Southeast Asian countries obviously feel pressure from China and try to host new FDI or at least retain that which has already been invested. The competition over location advantages has accelerated the improvement of the investment climate in East Asia. Some policy tools for promoting FDI, such as investment incentives, are clearly distortive. However, simple trade liberalization and deregulation are not sufficient to attract FDI. There are various kinds of market failure in the process of economic development, and the role of government is essential. The new economic thought suggests that industrial promotion policies must include measures to reduce service-link cost, help form agglomeration, and generate an economic environment for sophisticated fragmentation. Through trials and errors, the East Asian countries have gradually established new development strategies.

An important aspect of the new development strategies is the way that local industries/firms are treated. In traditional infant industry strategies, local industries/firms are insulated from foreign competition by trade barriers and are supposed to take advantage of dynamic economies of scale through learning by doing. Unlike such traditional strategies, the Southeast Asian countries and China actively utilize inward FDI in both import-substituting and export-oriented industries. A major channel for fostering local industries/firms is the connection with international production/distribution networks, and the development of supporting industries pen-

etrating into the vertical chain of production is stressed in middle- and long-run strategies.

It has been argued that one of the necessary conditions for East Asia to sustain rapid economic growth was the existence of development authoritarianism. However, the concentration of authoritarian political power does not necessarily mean economic dictatorship in development strategies. Development authoritarianism in East Asia was a political system that could implement the efficient allocation of physical and human resources under clear development strategies, while partially giving up the virtue of democracy. The first development strategies applied by development authoritarianism were for fostering import-substituting heavy industries. However, it was not necessarily the case that development authoritarianism chose such economic policies. A number of East Asian countries moved toward open economy strategies, actively utilizing FDI while keeping the political system intact. It must be noted that political transition and changes in development strategies do not necessarily proceed at the same timing.

### III. CURRENT STATUS OF INDUSTRIALIZATION IN INDONESIA

#### A. *Delayed Participation in Production/Distribution Networks*

The Asian financial crisis seriously affected the Indonesian economy, but the transition in the pattern of its exports was generally moving in the same direction before and after the crisis. Even just after the crisis began, the total value of exports in terms of U.S. dollars decreased only slightly in 1998 and 1999 and returned to an increasing trend in 2000, which presented a sharp contrast with imports which recorded a drastic and sustained drop in value. The shift in the composition of commodities exported also continued moving in the same general direction. Shares of resource-based products and light industrial products declined; in particular, the export share of mineral products in total exports dropped from 48% in 1990 to 30% in 2001. On the other hand, exports of machinery and transport equipment grew rapidly; the value of such exports grew 27 times, and their share in total exports increased from 1.4% in 1990 to 16% in 2001.

Looking only at the statistics for Indonesia, one could conclude that the machinery industry is a leading export sector. However, machinery's share of exports in Indonesia is substantially lower than that in neighboring countries. Table I presents the composition of commodities exported by ASEAN5 and China in 2001. The share of exports for machineries was 74% in the Philippines, 61% in Malaysia, 42% in Thailand, and 36% in China. For Indonesia, even after excluding mineral products, the share was still only 23%. Table II provides another look at the same statistics, showing the share for Indonesia in total exports by ASEAN5 and China. Indonesia's share of machinery exports was only 2–3% of the total machinery exports by these countries.



TABLE I  
COMPOSITION OF EXPORTS FROM ASEAN MEMBER COUNTRIES AND CHINA, 2001

	SITC	Indonesia	Malaysia	Philippines	Singapore	Thailand	China
Total exports (U.S.\$ million)		56,317	88,004	32,150	121,754	65,113	266,098
Agricultural products		12.5	8.2	6.1	2.7	18.5	6.2
Food and food products	0, 1, 4, 22	8.9	6.1	5.6	2.3	15.4	5.3
Materials	21, 23-26, 29	3.6	2.1	0.5	0.4	3.1	0.9
Mineral products		30.8	10.7	2.7	8.7	3.8	4.9
Minerals and others	27, 28	3.8	0.1	0.7	0.3	0.5	0.5
Fuels	3	25.3	9.7	0.8	7.6	2.8	3.2
Nonferrous metals	68	1.6	0.9	1.1	0.9	0.5	1.3
Manufactured goods		56.0	80.0	91.0	84.3	74.1	88.6
Iron and steel	67	0.7	0.9	0.0	0.4	1.0	1.2
Chemicals	5	5.0	4.3	1.0	8.1	5.8	5.0
Other manufactured goods	61-64, 66, 69	11.9	4.3	1.9	1.9	7.3	7.7
Machinery and transport equip.		16.2	60.6	74.2	64.5	42.0	35.7
Electricity generators	71	0.6	0.8	0.2	1.1	1.8	1.2
Industrial machines and equip.	72, 73, 74	0.9	2.4	1.2	4.6	4.2	3.9
Office machines and telecom.	75, 76	9.6	32.9	25.4	28.3	17.7	17.8
Electric machinery and equip.	77	4.1	23.8	44.7	28.5	14.0	9.5
Automobiles and other transp.	78, 79	1.0	0.7	2.7	1.9	4.3	3.4
Textiles	65	5.7	1.2	0.8	0.6	2.9	6.3
Clothing	84	8.0	2.4	7.4	1.3	5.5	13.8
Other consumer goods	8 (except 84)	8.4	6.4	5.5	7.4	9.7	19.0
Non-classified	9	0.8	1.1	0.2	4.3	3.5	0.2
Total		100.0	100.0	100.0	100.0	100.0	100.0

Source: United Nations, COMTRADE CD-ROM: PC-TAS Version 1997-2001 in HS or SITC, 2003.

TABLE II  
INDONESIA'S EXPORTS AS A SHARE OF TOTAL EXPORTS FROM ASEAN5 AND CHINA, 2001

	SITC	1997	1998	1999	2000	2001
(%)						
Agricultural products		15.5	15.5	15.6	15.5	14.6
Food and food products	0, 1, 4, 22	14.1	13.6	14.7	14.0	12.8
Materials	21, 23–26, 29	20.6	23.6	19.5	20.8	22.4
Mineral products		31.4	30.9	32.3	30.8	32.2
Minerals and others	27, 28	44.4	42.3	43.1	45.7	47.7
Fuels	3	33.5	33.3	34.9	31.9	33.6
Nonferrous metals	68	10.2	11.3	11.8	13.7	13.4
Manufactured goods		5.5	5.4	6.0	6.5	6.1
Iron and steel	67	4.8	10.7	10.2	7.3	7.2
Chemicals	5	7.4	8.5	8.6	9.6	8.4
Other manufactured goods	61–64, 66, 69	20.1	17.7	20.8	19.3	17.3
Machinery and transport equip.		2.2	2.2	2.2	3.5	3.2
Electricity generators	71	3.3	6.6	5.3	6.6	5.2
Industrial machines and equip.	72, 73, 74	1.8	2.8	2.6	3.1	2.3
Office machines and telecom.	75, 76	2.6	2.1	2.4	4.7	4.0
Electric machinery and equip.	77	1.4	1.3	1.4	2.0	2.1
Automobiles and other transp.	78, 79	3.5	5.4	4.4	3.7	3.4
Textiles	65	10.7	12.3	15.0	14.6	13.4
Clothing	84	6.5	6.2	8.9	9.2	8.9
Other consumer goods	8 (except 84)	6.4	6.4	6.6	6.7	6.1
Non-classified	9	54.9	61.0	23.6	7.8	4.5
Total		10.2	9.8	9.1	9.5	8.9

Source: Same as for Table I.

These observations are consistent with the impression obtained from Figure 1. Exports in 2000 of machinery and machine parts and components as a share of total exports from Indonesia were 18.1% and 9.3% respectively, while as a share of imports they were 28.7% and 15.7%, respectively. Thus Indonesia is toward the right-hand side in the diagram. While other East Asian countries moved from the right to the left during the last decade, Indonesia remained relatively stagnant. This is clear indication that Indonesia has been left behind in connecting itself with international production/distribution networks.

Some may argue that Indonesia's relatively remote location, compared with the neighboring countries, would affect its connectivity with such networks. It could also be argued that as a big country, Indonesia's exports would be lowered because of its large domestic demand. In order to respond at least partially to such arguments, I will conduct a standard gravity model exercise.<sup>5</sup> I place the value of bilateral trade in machine parts and components on the left-hand side of the regression

<sup>5</sup> For the (fragile) theoretical foundation of the gravity equation, see chapter 5 of Feenstra (2003). Here I do not pursue any rigorous connection with theoretical models but use the technique as an empirical tool for characterizing trade patterns.

TABLE III  
 THE GRAVITY MODEL: REGRESSION RESULTS (1)  
 (Dependent Variable: The Value of Bilateral Trade in Machine Parts and Components)

Model	1 All Samples	2 Exporters: East Asia	3 Importers: East Asia
Constant	-8.73*** (0.97)	-1.52 (2.14)	11.90*** (3.82)
Distance	-2.10*** (0.07)	-0.97*** (0.20)	-3.97*** (0.37)
Exporter's GDP	1.49*** (0.05)	0.73*** (0.07)	1.55*** (0.12)
Exporter's GDP per capita	0.90** (0.05)	0.44** (0.07)	1.17*** (0.14)
Importer's GDP	1.17*** (0.04)	1.09*** (0.07)	0.57*** (0.12)
Importer's GDP per capita	0.13*** (0.05)	0.22*** (0.07)	0.44*** (0.11)
Neighboring dummy	0.19*** (0.34)	1.08 (0.73)	-0.94 (1.30)
East Asian exporter dummy	3.70*** (0.16)		0.35 (0.66)
East Asian importer dummy	1.28*** (0.18)	2.09*** (0.38)	
Indonesia dummy		-0.77** (0.30)	0.14 (0.53)
Number of samples	3,960	648	541
Adjusted R-squared	0.59	0.65	0.61

Notes: 1. Data are for 2001.

2. All variables except dummies are in the logarithmic form.

3. Standard deviation in parenthesis.

4. East Asia includes Indonesia, Malaysia, the Philippines, Thailand, Singapore, Japan, Korea, China, Hong Kong, and Vietnam.

5. East Asian exporter (importer) dummy is 1 when exporter (importer) is one of the East Asian countries, 0 otherwise.

6. The Indonesia dummy is 1 when the exporter (model 2) or importer (model 3) is Indonesia; otherwise it is 0.

\*\*\* Significant at the 1% level; \*\* 5%; \* 10%.

equation. On the right-hand side are listed GDP and GDP per capita of exporting and importing countries, geographical distance between two capitals, and some dummy variables. All variables except dummies are in the logarithmic form as usual.<sup>6</sup>

The regression results are reported in Table III. The estimated coefficients with full samples consisting of bilateral trade among 73 countries (27 OECD member countries and 46 other countries) are consistent with the usual results; the coefficients for GDP and per capita GDP have significantly positive signs while the coef-

<sup>6</sup> The detailed specification as well as data sources are available in Kimura and Takahashi (2003).

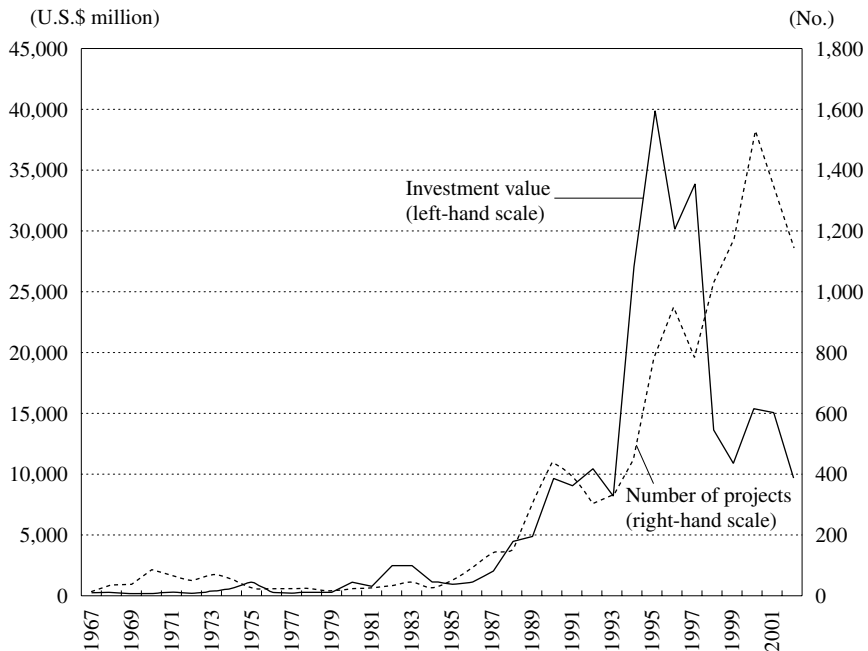
TABLE IV  
 THE GRAVITY MODEL: REGRESSION RESULTS (2)  
 (Dependent Variable: The Value of Bilateral Trade in Machine Parts and Components)

Model	1 East Asia	2 East Asia
Constant	7.74*** (1.59)	8.48*** (1.56)
Distance	-0.56*** (0.16)	-0.51*** (0.16)
Exporter's GDP	0.40*** (0.08)	0.40*** (0.08)
Exporter's GDP per capita	0.39** (0.07)	0.33*** (0.07)
Importer's GDP	0.22*** (0.08)	0.25*** (0.08)
Importer's GDP per capita	0.46*** (0.07)	0.42*** (0.07)
Number of MNEs	0.29*** (0.06)	0.25*** (0.06)
Indonesia dummy		-0.62** (0.25)
Number of samples	81	81
Adjusted <i>R</i> -squared	0.71	0.73

- Notes: 1. Data are for 2001.  
 2. All variables except dummies are in the logarithmic form.  
 3. Standard deviation in parenthesis.  
 4. East Asia includes Indonesia, Malaysia, the Philippines, Thailand, Singapore, Japan, Korea, China, Hong Kong, and Vietnam.  
 5. The Indonesia dummy is 1 when Indonesia is either the exporter or importer; otherwise it is 0.  
 \*\*\* Significant at the 1% level; \*\* 5%; \* 10%.

ficient for distance has a significantly negative sign. I included an East Asian exporter dummy and importer dummy in the regression. Both have significantly positive signs, though the coefficient is larger on the export side, indicating the existence of international production/distribution networks in East Asia. The second and third regressions limit sample sets to bilateral trade with East Asian countries as exporting or importing countries. Of particular interest are the signs of coefficients for the Indonesia dummy; the sign is significantly negative for Indonesia as an exporting country while the sign is not significant for Indonesia as an importing country. Table IV presents the results of a similar analysis with the sample set of intra-East-Asia bilateral trade only. The Indonesia dummy, which is one when Indonesia is either an exporter or an importer and zero otherwise, has a significantly negative sign as would be expected. Overall, we can conclude that even after controlling for economic size and distance, exports of machine parts and components by Indonesia are smaller than the gravity model predicts.

Fig. 2. Inward FDI Flows into Indonesia (Approved Basis)



Source: Badan Koordinasi Penanaman Modal, BKPM (Investment Coordination Board). Available from <http://www.bkpm.go.id/en/index.php>.

Next, let us check the pattern of inward FDI in Indonesia. Figure 2 plots over-time changes in approval-based inward FDI in terms of the investment value and the number of projects. It must be noted that approval-based FDI is substantially different from implementation-based FDI in Indonesia, but it is still informative in order to understand the long-run transition. The value of FDI trended upward from the end of the 1980s and clearly accelerated after policy changes in 1994. However, it dropped drastically after the Asian financial crisis, and there was no sign of recovery even by 2002. The number of investment projects did not decrease so drastically, meaning that the size of average investment became smaller. The sectoral pattern of FDI does not change much over time. Chemicals, pharmaceuticals and the tertiary sector have been major sectors for inward FDI, while investment in machinery has been limited.

Tables V and VI present flows and stocks of incoming FDI on a implementation/balance-of-payment basis in ASEAN10. Table V shows that all the countries except Thailand and the Philippines suffered from some decrease in FDI inflows just after the Asian financial crisis began. However, Indonesia was the only country experiencing net outflows of FDI. As a result, the net FDI inflow into Indonesia in 1995–2001 came to only U.S.\$4 billion which was much less than the other four ASEAN-

TABLE V  
INWARD FDI FLOWS INTO ASEAN10 (BOP BASIS)

	1995	1996	1997	1998	1999	2000	2001	2002 First-Half	1995-2001 Total
Brunei	583	654	702	573	748	549	526	216	4,335
Cambodia	151	294	168	121	144	112	113	18	1,101
Indonesia	4,346	6,194	4,678	-356	-2,745	-4,550	-3,279	-1,172	4,288
Laos	88	128	86	45	52	34	24	22	458
Malaysia	5,815	7,297	6,323	2,714	3,895	3,788	554	731	30,386
Myanmar	318	581	879	684	304	208	192	NA	3,165
Philippines	1,577	1,618	1,261	1,718	1,734	1,354	1,537	1,342	10,799
Singapore	9,686	8,608	12,836	8,215	12,825	5,389	8,583	NA	66,143
Thailand	2,004	2,271	3,627	7,434	6,150	3,280	3,780	344	28,546
Vietnam	1,780	1,803	2,587	1,700	1,484	1,289	1,300	450	11,944
Total	26,348	29,447	33,147	22,847	24,590	11,453	13,331		161,164

Source: ASEAN Secretariat, ASEAN FDI Database.

TABLE VI  
INWARD FDI STOCKS INTO ASEAN10

	(U.S.\$ million)						
	1980	1985	1990	1995	1999	2000	2001
Brunei	19	28	23	631	3,156	3,756	3,999
Cambodia	38	38	38	356	1,372	1,551	1,664
Indonesia	10,274	24,971	38,883	50,601	65,188	60,638	57,361
Laos	2	1	13	205	516	550	574
Malaysia	5,169	7,388	10,318	28,732	48,961	52,748	53,302
Myanmar	746	746	913	1,831	3,096	3,191	3,314
Philippines	1,281	2,601	3,268	6,086	11,199	12,440	14,232
Singapore	6,203	13,016	28,565	59,582	90,307	95,714	104,323
Thailand	981	1,999	8,209	17,452	25,601	24,468	28,227
Vietnam	9	64	260	5,760	13,334	14,623	15,923
Total	24,722	50,852	90,490	171,236	262,730	269,679	282,919

Source: ASEAN Secretariat, ASEAN FDI Database.

founding countries and Vietnam. Table VI indicates that Indonesia accounted for almost half of FDI stocks in ASEAN, but its share fell quickly in the 1990s. Overall, we can confirm that Indonesia missed the investment boom in the 1990s, particularly in the machinery sectors that formed the international production/distribution networks.

#### B. *Economic Environment for FDI in Indonesia*

It is apparent that stagnant inward FDI in Indonesia is due in part to the slow and incomplete transformation of development strategies and to the massive impact of the Asian financial crisis. On the other hand, it must also be pointed out that Indonesia's inferior economic environment for FDI has made it relatively less attractive compared to its neighboring countries which have made great effort to improve their location advantages in order to attract more FDI.

According to *The Global Competitiveness Report 2003–2004* published annually by the World Economic Forum (WEF), Indonesia is listed 60th out of 101 countries in the business competitiveness index, which is lower than Singapore (8th), Malaysia (26th), Thailand (31st), and China (46th) while a bit higher than the Philippines (64th). It is listed as 65th on the contracts and law index and 88th on the corruption index. Overall, the WEF is critical of the business environment in Indonesia.<sup>7</sup> The Japan Bank for International Cooperation (JBIC) conducts an annual questionnaire survey for Japanese manufacturing firms and reports the ranking of countries as a prospective destination for those firms to invest over the midterm

<sup>7</sup> See <http://www.weforum.org> for details.

(i.e., in about three years). Until FY2002 Indonesia was ranked 4th after China, Thailand, and the United States, but in FY2003 it dropped to 6th place after being overtaken by Vietnam and India.<sup>8</sup> Of course, such rankings should not be taken too seriously. International comparisons are by nature very difficult, and evaluation always suffers from time lags. Moreover, Indonesia's economy showed clear signs of recovery in 2003, and political stability was restored. Thus its ranking is likely to improve to some extent. However, it is useful to know what foreign investors think of Indonesia as a place for FDI.

The Japan Machinery Center for Trade and Investment (JMC) annually compiles its *Issues and Requests Relating to Foreign Trade and Investment* based on complaints raised by Japanese firms.<sup>9</sup> The major complaints are: (i) restrictions on the entry of foreign capital, (ii) slow bureaucratic processing by local governments, (iii) policies and their implementation regarding tariffs and customs clearances, (iv) deficiencies and inadequacies in the systems of free trade zones and special economic zones, (v) the risks of substantial fluctuations in foreign exchange rates, (vi) taxation and its implementation, (vii) labor issues and rising minimum wages, (viii) insufficient protection of Intellectual Property Rights (IPRs), (ix) insufficient administrative procedures, ill-defined implementation of systems, and the morals of public servants, (x) inadequate laws and regulations along with their arbitrary revision or nullification, and (xi) other problems including worsening public security, inadequate infrastructure, and deterioration of the business environment.

The Jakarta Japan Club (JJC) is also active in examining issues and problems related to the investment environment, and organizes consultations with the Indonesian government.<sup>10</sup> In FY2003 the following five subcommittees were organized: (i) subcommittee on customs procedures and duties, (ii) subcommittee on taxation, (iii) subcommittee on labor issues, (iv) subcommittee on promoting investment and supporting industries, and (v) subcommittee on electricity supply.

According to the Marrakesh Agreement, the World Trade Organization (WTO) undertakes trade policy reviews (TPR) for member countries. Indonesia's TPR was published in June 2003.<sup>11</sup> In the report Japan, Canada, New Zealand, the EU, the United States, Norway, Switzerland, Slovakia, and other countries raised various issues and problems related to FDI. The major problems pointed out included non-transparency in policy implementation and administrative procedures, chaotic regulatory framework as a result of decentralization, and insufficient protection of IPRs.

These issues and problems have been raised by and primarily affect foreign investors and countries, and thus the Indonesian government may not have to respond seriously to all of them. However, it can learn useful lessons from the long list of

<sup>8</sup> See Marugami et al. (2004) for details.

<sup>9</sup> See [http://www.jmcti.org/mondai/top\\_e.html](http://www.jmcti.org/mondai/top_e.html).

<sup>10</sup> See <http://www.jjc.or.id>.

<sup>11</sup> See [http://www.wto.org/english/tratop\\_e/tpr\\_e/tp216\\_e.htm](http://www.wto.org/english/tratop_e/tpr_e/tp216_e.htm).



complaints. Issues can be classified into the following three categories: (i) issues related to Indonesia's stage of development or current level of human capital and institutions, (ii) issues caused by temporary shocks during the transition of the country's political and economic regime, and (iii) issues related to development strategies and the government's seriousness in promoting FDI. The first category of issues will certainly require time and sustained effort to overcome. The second will eventually be solved once Indonesia's political and economic turmoil has settled down. The third category of issues is most problematic. These issues can largely be solved even in the short run, but their solution depends very much on the intention and willingness of Indonesia's political leaders. The regulatory system for FDI before and after investment, trade facilitation, pre-investment support, and other issues can be overcome or at least reduced, once political leaders believe in the importance of inward FDI.

### C. *Basic Economic Condition and Political Economy*

Although various interpretation and evaluation are possible, it can at least be argued that Indonesia has been slow to participate in the international production/distribution networks in East Asia. One reason for the delay was that the transformation of development strategies was not carried out in a timely or effective manner. Why was this the case? What sort of conditions were behind this delay? It is not easy to give a precise, rigorous answer by investigating the tangle of causal relationships, but I would like to present some hypotheses drawn from observations of the economic structure and institutions of Indonesia.

The first element that needs to be considered is the basic condition of Indonesia's economic structure. Indonesia is a resource-rich country, and its size in terms of population and geographical area is huge. Thus from the early phase of development, the country pursued full-set-type industrialization and import substitution in the area of heavy industry. As the largest country in Southeast Asia, Indonesia attracted the interest of foreign companies from the beginning, and inward FDI was relatively abundant. However, most of this FDI was directed at natural resource exploitation or import substitution. This basic condition of full-set industrialization, import substitution, and natural resource exploitation tended to delay the development of export-oriented manufacturing undertaken by either local firms or MNEs. Moreover, the introduction of foreign capital for investment in natural resources and the domestic market was sometimes accompanied by bargaining over rent, and this generated an underlying mistrust against foreign capital. Deregulation of FDI in 1994 provided an opportunity, though not fully realized, to set up a new policy regime in which foreign capital would be utilized more aggressively, particularly in machinery manufacturing. However, for the manufacturing sector as a whole, the first half of the 1990s was rather a time of returning to domestic-demand-oriented growth and import substitution. Thus there was strong resistance

in Indonesia against the introduction of new development strategies promoting aggressive inward FDI.

The second element of consideration is related to structural problems arising from Indonesia's stage of development. To fully utilize the new economic thought of fragmentation, agglomeration, and the internalization of firms, it is necessary for countries to reach a certain level of development. In the case of Indonesia, one of the most serious problems is the immaturity of local firms that can establish vertical production links with MNEs. Policies to promote small and medium-sized enterprises (SMEs) in Indonesia were not so much a part of economic policy to promote efficiency; rather they had a strong hue of being a part of social policy. Small and medium-sized enterprises in Indonesia consist of firms belonging to so-called supporting industries and those in rural areas classified as cottage industries. The latter have long been affected by policies for income redistribution in rural areas rather than by those for purely economic purposes. The scarcity of local entrepreneurship in supporting industries has been a fundamental problem; and along with immature supporting industries, insufficiently prepared economic infrastructure has been another problem. These economic problems have enhanced the cost of aggressively promoting export-oriented FDI.

The third element to consider is the long-standing pro-*pribumi* policies that are important components of both the structure and institutions of Indonesia. Small and medium-sized enterprise promotion policies may also be interpreted in this context. Small and medium-sized enterprises working in supporting industries are largely of Chinese ethnicity while cottage industries are mostly run by *pribumi*. So there was a big bias in the politico-economic structure that favored the *pribumi* in the promotion of SMEs. The basis of overall economic policy has long been on economic liberalization and the utilization of private capital. However, after 1985 pro-*pribumi* policies were intensified (Sato 2002). The existence of pro-*pribumi* policies was one of the possible elements that deterred Indonesian leaders from undertaking substantial transformation of development strategies.

Indonesia announced the substantial deregulation of foreign capital in 1994. However, by that time China was already attracting a massive amount of FDI, and throughout the whole of ASEAN there was an intense sense of crisis. Indonesia could not suddenly overcome its legacy of pro-*pribumi* policies and import-substituting industrialization. There was no time for export-oriented foreign companies to become influential actors, and no strong agglomeration effects could arise. As a result, Indonesia has not realized any politico-economic dynamism that is breaking the old structure. Indonesia's delay in transforming development strategies was not caused by the Asian financial crisis; rather the root of the problem can be found in the late 1980s or the early 1990s, and the crisis simply aggravated the situation.

#### IV. PERSPECTIVES ON DEVELOPMENT STRATEGIES IN THE POST-SOEHARTO ERA

##### A. *Reform and Inertia*

Since 2003 the Indonesian economy has shown obvious signs of recovery. Although the fear of terrorism still remains, domestic demand, particularly for automobiles and motorcycles, has been recovering rapidly. Some economists worried about the appreciation of the real exchange rate, but no serious effects on the economy have been reported though the inflation rate is still around 6 percent.<sup>12</sup> The improved economic situation is finally giving Indonesia some leeway for considering the future.

Although there has been steady progress in political reform, there has not been any active discussion on economic policies from the middle- and long-run perspective. What has been done to deal with the three elements that have deterred the reformulating of development strategies, i.e., the primary conditions of Indonesia's economic structure, the stage of the country's development, and pro-*pribumi* policies? Pro-*pribumi* pressure from above has been weakened, but the other two elements seem to remain basically intact.

The collapse of authoritarianism seems to be making it rather difficult to formulate and implement consistent development strategies with efficient resource allocation. Democratization has its own value, of course, but it seems to enhance uncertainties for foreign companies at least in the short run. These include intensifying labor issues and complications due to decentralizing of the bureaucracy.

Overall, for the economy and economic policies there still continues to be strong inertia carrying over from the Soeharto era. Meanwhile, the country needs to respond quickly to globalization. It is a critical time for Indonesia to be reconstructing development strategies.

##### B. *Two Development Scenarios*

For the sake of argument, I would like to present two development scenarios that Indonesia could follow. One is a scenario where the economy specializes in resource-based industries in accordance with the idea of comparative advantage. This scenario is quite popular among consultants from the United States and Europe, economists of international organizations, and technocrats in the Indonesian government. It is a logical scenario that accepts the current structure and actors in Indonesia. However, the author would like to argue that such a scenario is largely misleading and even harmful.

Indonesia is now facing a serious unemployment problem. An annual growth

<sup>12</sup> From the World Bank (2003, p. 4).

rate of 6–7 percent is required to lower the unemployment rate. However, the investment ratio has been stagnant at around 20 percent, which is 10 points lower than the pre-crisis level. To achieve rapid and sustained growth, the economy definitely needs a higher ratio of investment and greater productivity. Specialization in resource-based industries would not provide the high, long-sustained economic growth that is needed.

The current East Asian economies have become fundamentally different from the traditional international trade model where production technologies are constant return to scale and only commodities are traded across national borders. The benchmark model does not properly consider the movement of capital and technology through FDI and the existence of the agglomeration effect, but such phenomena are now increasingly important. The author believes that it is rather dangerous to discuss a scenario for Indonesia's development based on the old-fashioned theory of international trade.

The other scenario is for Indonesia to learn from the experience of its neighbors and nurture industries connecting into international production/distribution networks. In this scenario a country is required to concentrate a certain mass of resources on industrial promotion and improvement of the business environment under well-defined development strategies. At the same time, export-oriented FDI in machinery industries must be vigorously attracted and treated as new actors.

From the experience of other ASEAN countries, we know that FDI promotion does not necessarily require market-distorting policies such as strong tax incentives. Rather, what is important are policies to reduce service-link cost and help form agglomeration. Also a country should not be selective in hosting FDI, but basically should accept all FDI in any industry so as to form agglomeration. Transparency and accountability in policy formulation and implementation are also essential. In addition to trade and FDI liberalization, FDI facilitation is crucial. All of these accommodations to FDI are particularly helpful in attracting foreign SMEs.

Even with the second scenario, resource-based industries do not have to be given up. Indonesia is a big country, and the development of export-oriented machinery industries will not crowd out resource-based industries or cause substantial changes in the exchange rate. Both industries are open to foreign markets and can exist together.

### *C. Implication of Regional Trade Arrangements*

Indonesia has always been an active member of the ASEAN Free Trade Area (AFTA). During the Soeharto era, Indonesia was the virtual leader of ASEAN and took the initiative in formulating AFTA. Even after the onset of the financial crisis, Indonesia remained strongly supportive of AFTA, and its implementation of common effective preferential tariffs (CEPT) was quick and thorough.

However, it must be noted that AFTA was not a crucial factor in the formation of international production/distribution networks in the 1990s. While the organization

of AFTA was motivated by the fear of FDI being diverted to China (and was intended to display the pro-FDI attitude of ASEAN countries), actual hard-core tariff reduction started only in the late 1990s, and CEPT implementation has come only recently. Meanwhile the policy environment for international production/distribution networks formed under the unilateral reduction of tariffs on semiconductor-related parts and components was set down under the initiative of APEC and the extensive use of the duty drawback system. Indonesia was somewhat behind in carrying out such policy reform.

East Asia is now deeply committed to regionalism and furthering integration under AFTA, and the conclusion of intra-regional bilateral agreements are being vigorously pursued.<sup>13</sup> In the context of industrialization, such trade arrangements could potentially have two effects, one being the reorganization of import-substituting industries, the other being the further strengthening of international production/distribution networks. The former would be due to the removal of tariffs while the latter would require a comprehensive policy package going beyond tariff removal. Whether Indonesia becomes active in negotiating FTAs and utilizes the two effects will be critical for the country.

## V. CONCLUDING REMARKS

For Japan and other East Asian countries, Indonesia is a country of particular importance. Its political stability and economic development are crucially important for regionwide stability. Indonesia has now largely overcome its chaotic situation and has room for considering medium- and long-run economic development. By learning from the experience of neighboring countries, Indonesia can reformulate its development strategies and concentrate a sufficient mass of resources on promoting industrial development. The author hopes that Indonesia will not miss this opportunity to reform itself.

<sup>13</sup> See Yamazawa and Hiratsuka (2003) for a detailed analysis of the Japan-ASEAN economic partnership, although they do not explicitly examine international production/distribution networks.

## REFERENCES

- Ando, Mitsuyo, and Fukunari Kimura. Forthcoming. "The Formation of International Production and Distribution Networks in East Asia." In *International Trade*, ed. Takatoshi Ito and Andrew Rose. NBER East Asia Seminar on Economics, Vol. 14. Chicago: University of Chicago Press.
- Arndt, Sven W., and Henryk Kierzkowski, eds. 2001. *Fragmentation: New Production Patterns in the World Economy*. Oxford: Oxford University Press.
- Cheng, Leonard K., and Henryk Kierzkowski, eds. 2001. *Global Production and Trade in East Asia*. Boston: Kluwer Academic Publishers.

- Deardorff, Alan V. 2001. "Fragmentation in Simple Trade Models." *North American Journal of Economics and Finance* 12, no. 2: 121–37.
- Feenstra, Robert C. 2003. *Advanced International Trade: Theory and Evidence*. Princeton, N.J.: Princeton University Press.
- Fujita, Masahisa; Paul Krugman; and Anthony J. Venables. 1999. *The Spatial Economy: Cities, Regions, and International Trade*. Cambridge, Mass.: MIT Press.
- Jones, Ronald W., and Henryk Kierzkowski. 1990. "The Role of Services in Production and International Trade: A Theoretical Framework." In *The Political Economy of International Trade: Essays in Honor of Robert E. Baldwin*, ed. Ronald W. Jones and Anne O. Krueger. Cambridge, Mass.: Basil Blackwell.
- Kimura, Fukunari. 2004. "New Development Strategies under Globalization: Foreign Direct Investment and International Commercial Policy in Southeast Asia." In *New Development Strategies: Beyond the Washington Consensus*, ed. Kohsaka Akira. Basingstoke: Palgrave Macmillan.
- Kimura, Fukunari, and Mitsuyo Ando. Forthcoming. "The Economic Analysis of International Production/Distribution Networks in East Asia and Latin America: The Implication of Regional Trade Arrangements." *Business and Politics*.
- Kimura, Fukunari, and Yuya Takahashi. 2003. "Study on Trade and Investment Related Policies in Indonesia: The First Progress Report." Paper submitted to the Japan Bank for International Cooperation (JBIC).
- Krugman, Paul. 1991. "Increasing Returns and Economic Geography." *Journal of Political Economy* 99, no. 3: 483–99.
- . 1995. *Development, Geography, and Economic Theory*. Cambridge, Mass.: MIT Press.
- Marugami, Takashi; Takeshi Kasuga; Kei Saito; and Mayumi Suzuki. 2004. "Waga kuni seizōgyō kigyō no kaigai jigyō tenkai ni kansuru chōsa hōkoku: 2003 nendo kaigai chokusetsu tōshi ankēto chōsa kekka (dai 15 kai)" [Survey report on overseas business operations by Japanese manufacturing companies—Results of JBIC FY2003 survey: Outlook for Japanese foreign direct investment (15th annual survey)]. *Kaihatsu Kin'yū Kenkyūjo hō* [Journal of JBIC Institute] 18: 4–76.
- Sato, Yuri. 2002. "Keizai saiken to shoyū saihen: Keizai shoyū kōzō eno kainyū seisaku no shiten kara" [Reforming economic structure: Policies for intervening in economic ownership]. In *Minshuka jidai no Indonnesia: Seiji keizai hendō to seido kaikaku* [Democratizing Indonesia: Politics and economy in historical perspective], ed. Yuri Sato. Chiba: Institute of Developing Economies, JETRO.
- World Bank. 1993. *The East Asian Miracle: Economic Growth and Public Policy*. New York: Oxford University Press for the World Bank.
- . 2003. *Indonesia Development Policy Report: Beyond Macroeconomic Stability*. Report No. 27374-IND. Washington, D.C.: World Bank.
- Yamazawa, Ippei, and Daisuke Hiratsuka, eds. 2003. *Toward ASEAN-Japan Comprehensive Economic Partnership*. Chiba: Institute of Developing Economies, JETRO.