

TRADE LIBERALIZATION AND PRODUCTIVITY GROWTH IN ASIA: INTRODUCTION AND MAJOR FINDINGS

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A. *Motivation*

Trade policies have a substantial impact on economic development. In the early post-World War II period a number of developing countries after gaining independence, sought economic development by substituting imports with domestic production through import protection. But most of these countries could not achieve their objective, as import-substitution policies proved to be ineffective. Some of the problems caused by import-substitution policies include inefficient production and limited market size. Inefficient production arose as import protection limited competition among producers, while protected domestic market did not provide sufficient demand for producers to enjoy benefits accrued from scale economies.

Despite the fact that import-substitution policies proved to be a stumbling block to economic development, few countries abandoned these policies. Several that did were in East Asia and included Hong Kong, Taiwan, the Republic of Korea, and Singapore. These countries turned to export-promotion policies during the 1950s and 1960s. Export-promotion policies were chosen as they were thought to provide greater market opportunities overseas. These policies turned out to be a success, and the four countries achieved rapid export expansion, which in turn led to rapid economic growth. The four became to be known as the Asian NIEs (newly industrializing economies), and their economic success prompted several countries in ASEAN (the Association of South-East Asian Nations) to shift their trade policies from import substitution to those oriented toward export promotion, leading to favorable economic performance. It should be noted here that the success of these East Asian countries is attributable not only to their trade policies, but also other factors such as effective macroeconomic policies and human resource development policies.

The success of East Asia persuaded policy makers in other parts of the world that outward-oriented policies were effective in promoting economic development. Consequently, starting in the mid-1980s, other countries in Asia and in Latin America as well as in other parts of the world followed suit.

Policy recommendations by international organizations such as the World Bank and the International Monetary Fund (IMF) played an important role in this policy shift. A number of countries suffered from accumulated foreign debt caused by increasing fiscal deficits and unsuccessful attempts at import substitution. At first the foreign debt problem was considered a temporary problem requiring

short-term policy measures such as providing short-term foreign loans. It became apparent, however, that the problem was a structural one necessitating medium- to long-term structural adjustment. In other words, to overcome the problem, structural adjustment policies emphasizing supply-side factors were considered necessary, as these would stimulate countries to build an economic structure suitable for the expansion of production and exports. The World Bank and the IMF persuaded countries to adopt these structural adjustment policies as part of the conditions attached to their loans given to the countries in trouble. Having stated the importance of the role played by these two international organizations in coaxing troubled countries to switch policies from import substitution to export promotion, it was the recognition of the need for such a policy shift on the part of these countries that was the crucial factor. Indeed, a number of countries have continued liberalizing their trade and foreign investment regimes unilaterally and voluntarily even after their structural adjustment problems were ameliorated [2].

In addition to liberalization of foreign trade policies, another notable characteristic of foreign economic policies pursued by developing countries in recent years is liberalization of policies toward foreign direct investment (FDI). In the past many countries restricted the inflow of FDI in order to protect domestic producers from highly competitive foreign multinationals. The attitude toward foreign multinationals has changed. They have come to be regarded as a contributing factor to the economic development of recipient countries by providing these countries not only with technology and know-how but also with international sales and procurement networks. Recognizing these positive factors obtained from multinationals, a number of countries adopted preferential policies to attract FDI.

Liberalization of foreign trade and investment attracted FDI, particularly the type of FDI intended to set up an export platform. As a consequence, in some countries a virtuous cycle consisting of expanding exports, investment, and output was created, leading to rapid economic growth. In contrast, there are a number of countries whose performance has not been as favorable despite the adoption of similar policies. In order to identify the factors contributing to economic development and to formulate appropriate policies for economic development, a careful examination of the impact of foreign trade and FDI policies on economic development needs to be carried out.

B. *Purpose of the Project*

A number of studies have examined the effect of trade liberalization on economic development: for example, Little-Scitovsky-Scott [8], Krueger [6], Bhagwati [1], and Pappageorgiou-Michaely-Choksi [10]. These studies examined in detail changes in trade policies and their effect on foreign trade and economic development but without empirically analyzing their effect on productivity. Indeed, there have been only a limited number of studies which have focused on the impact of trade liberalization on productivity, some of which will be discussed in the section on methodology. In light of the limited number of studies, the papers in this issue of *The Developing Economies* attempt to examine

quantitatively the effect of the liberalization of trade and FDI on productivity. The focus on productivity stems from an observation that productivity (broadly defined to include efficient use of resources, technological progress, and efficient management) is a crucial factor leading to sustainable economic growth. Even without an increase in the use of inputs such as labor, capital, or intermediate inputs, production and thus the economy will grow with the increase in productivity.

Liberalization of trade and FDI leads to improvement in productivity by influencing supply-side and demand-side factors of production or producer behavior. Looking first at the impact of demand-side factors, one can identify that of competitive pressure introduced through liberalization. With liberalization of trade and FDI, imports as well as the number of foreign firms operating in the liberalizing country increase, leading to greater competitive pressure on domestic firms. Faced with increased competitive pressure, domestic firms have to improve productivity to survive. Domestic firms unable to meet increased competition are forced to exit from the industry. In contrast to firms under competitive pressure, domestic firms operating in a protected environment lack competition which results in inefficient production. Moreover, protection policies tend to promote rent-seeking activities, as protected producers can enjoy monopoly rents. Rent-seeking activities, which are nonproductive, lower productivity as they shift resources away from productive activities.

Turning to the supply-side impact of liberalization on trade and FDI, it may be better to divide the discussion into two parts, one on trade liberalization and the other on FDI liberalization. Trade liberalization enables firms to use high-quality parts, components, and machinery at lower prices resulting in improved productivity. By contrast, protection of firms producing parts, components, and machinery forces the firms using these materials to use low-quality but high-priced products. To offset the disadvantage, firms using low-quality but high-priced components and equipment ask for protection. In other words, protection tends to proliferate bringing on a vicious cycle of low efficiency.

Liberalization of FDI contributes positively to the recipient countries, as multinational enterprises (MNEs) bring in not only technologies and management know how, but also financial resources used for fixed investment. All of these resources, which are in short supply in the recipient countries, contribute to improvement in productivity.

Improvement in productivity leads to greater production, even if the amount of resources used in production remains the same, as mentioned above. Moreover, improvement in productivity leads to greater exports, as it tends to enhance competitiveness. It is important to note that increased production and exports in turn contribute to improvement in productivity through the following channels. Increased production enables the firms to exploit benefits accrued from large-scale production. As the level of production increases, the average cost tends to decline because the fixed cost of production is spread over a large quantity leading to higher productivity. With foreign exchange earned from increased exports, firms can import high-quality components and equipment resulting in higher productivity.

The preceding discussion setting out a case where a virtuous cycle is formed

can be summarized as follows: liberalization of trade and FDI, improvement in productivity, expansion of exports and output, further improvement in productivity. Success in economic growth and export expansion in turn promote further liberalization in foreign trade and FDI reinforcing the virtuous cycle.

Although the discussion above emphasized the importance of productivity in linking liberalization in trade and FDI on the one hand and export growth on the other, it should be noted here that liberalization of trade and FDI policies could promote exports and hence economic growth even without improving productivity. Some of the reasons for this possibility have already been noted above, but two additional reasons for such a possibility can be mentioned. First, trade liberalization shifts the incentive from import substitution to export promotion via increasing the relative price of exportables to that of importables, thereby leading to an increase in exports. Second, FDI liberalization leads to an increase in the number of multinationals with extensive marketing channels. These marketing channels provide the recipient country with a greater opportunity for sales in foreign countries.

C. *Methodology*

Previous studies on the effect of trade policies on productivity, whose number is very limited as noted earlier, can be divided into two types depending on their methodology and coverage of countries and industries; one type pursues cross-sectoral analysis on a particular country and the other performs cross-country analysis. Examples of the former type include Krueger-Tuncer [7], which examines the effect of protection on productivity, while examples of the latter include Nishimizu-Robinson [9] and World Bank [13]. Most of these studies have found that trade liberalization improved productivity, but the relationship between the two was not robust. Although there are several studies on trade liberalization and productivity, there have been very few studies which have examined the effect of the FDI liberalization on productivity, one of the major issues analyzed in this project.

This project attempts to examine the effect of liberalization in trade and FDI on productivity in selected Asian countries. To discern their relationship rigorously, a cross-country analysis as well as seven cross-industry studies in individual country (Korea, Taiwan, Thailand, Malaysia, Indonesia, the Philippines, and India) are conducted. In the country studies, the processes of liberalization in trade and FDI are analyzed before carrying out an analysis examining their impact on productivity.

Although the specific indicators used differ among the case studies, various quantitative measures are attempted to examine the degree of trade liberalization; i.e., changes in nominal and effective tariff rates, shares of imports and exports in GDP. Given the difficulty in obtaining an indicator showing the degree of liberalization concerning FDI such as tariff rates for trade liberalization, various shares representing the importance of foreign firms in economic activities of the host countries are used.

Among the various productivity measures, total factor productivity (TFP) is estimated and used for the analysis, wherever necessary data for estimating TFP

TABLE I
GROWTH OF GDP AND TFP FOR SELECTED DEVELOPING
COUNTRIES IN ASIA AND IN LATIN AMERICA

	GDP		TFP	
	1970-80	1980-90	1970-80	1980-90
Asia				
Korea	8.3	8.9	0.8	2.8
Taiwan	9.3	7.4	5.1	3.9
Singapore	8.6	6.8	0.7	1.6
Thailand	6.5	7.5	1.2	2.6
Malaysia	7.6	5.8	2.5	0.7
Indonesia	7.0	5.5	3.1	-0.1
Philippines	5.7	1.6	0.8	-2.2
India	3.0	5.4	-0.9	2.1
China	6.0	8.3	1.1	2.8
Latin America				
Chile	2.5	2.8	0.5	-0.1
Argentina	2.6	-1.2	0.1	-1.6
Mexico	6.4	1.6	1.1	-2.1
Brazil	8.2	1.5	0.4	-1.9
Colombia	5.3	3.4	0.8	0.4
Peru	3.7	-1.1	0.3	-3.0
Venezuela	3.1	0.7	-2.4	-0.6

Source: [5, various issues] [11, various issues]. TFP is computed by Hiroki Kawai of Japan Center for Economic Research.

are available. TFP, which is defined as a residual of output change obtained by subtracting the changes in inputs from output change, is considered to be a "pure" measure of productivity or productive efficiency.

D. *The Impact of Liberalization in Foreign Trade and Foreign Direct Investment on Productivity*

Asian countries have exhibited favorable economic performance compared to countries in other parts of the world (Table I). Indeed, the Asian region, because of its rapid economic expansion, is often characterized as the "growth pole" of the world economy. Table I shows that, in comparison with Latin American countries, Asian countries performed favorably not only in terms of GDP growth but also in terms of TFP growth. High TFP growth rates observed in general for Asian countries reflect dynamism of these countries. A closer examination of the performance of Asian countries reveals some differences among them. Roughly speaking, the higher the TFP growth, the higher the GDP growth. Indeed, for the period of 1980-90, Korea, Taiwan, Thailand, and China, which recorded the highest GDP growth rates also registered the highest TFP growth rates.

Turning to liberalization in foreign trade and FDI, several indicators show that significant progress has been made in recent years in a number of Asian countries. According to Table II, tariff rates for most of the selected Asian countries have declined over time despite some fluctuations. The declining trend in tariff rates

TABLE II
TARIFF RATES OF SELECTED DEVELOPING COUNTRIES

	Korea	Taiwan	Singapore	Indonesia	Malaysia	Philippines	Thailand	Mexico	Chile	India
1970	9.07									
1971	6.90									
1972	6.58		2.20	13.21	13.98	13.29	20.33	20.61	44.08	
1973	5.39		2.03	13.04	13.65	13.66	16.81	14.25	39.58	
1974	5.00		1.17	11.40	9.83	13.60	14.95	12.34	12.44	34.11
1975	6.18		1.32	10.02	10.25	21.24	13.80	13.66	18.02	28.33
1976	8.62		1.30	12.29	11.10	16.29	13.83	14.70	15.45	31.67
1977	9.68		1.30	12.65	11.32	16.78	13.98	9.49	15.69	31.12
1978	11.44	13.49	1.22	11.29	10.88	14.81	14.50	8.69	11.51	38.31
1979	9.99	14.29	1.09	7.92	9.80	13.05	12.62	11.22	8.16	39.25
1980	8.18	11.22	0.90	7.39	9.79	13.51	11.18	11.34	8.45	31.50
1981	7.15	9.50	0.78	7.16	9.35	12.02	11.21	10.39	9.72	35.49
1982	7.95	9.86	0.86	5.24	8.81	13.25	11.18	10.63	8.25	40.32
1983	9.41	9.53	0.92	4.20	9.31	14.24	11.99	8.34	13.20	43.25
1984	8.28	9.60	0.91	4.17	9.06	14.57	13.88	6.67	17.48	44.99
1985	7.61	9.87	0.72	5.97	9.12	14.57	13.51	8.94	19.34	53.59
1986	8.91	9.52	0.61	7.82	8.18	12.00	13.91	9.59	14.06	65.35
1987	10.03	9.22	0.55	4.96	6.69	17.64	12.11	9.84	14.31	70.44
1988	8.83	7.59	0.46	5.98	6.14	13.55	11.75	5.15	12.22	66.12
1989	7.09	7.46	0.42	6.11	5.26	15.83	11.30	8.08		59.51
1990	7.87	6.80	0.34	6.92	4.78	14.47	11.58	5.12		57.82
1991	5.82	5.69			4.36	18.17	10.45			

Sources: [5, 1992 edition] [4, various issues], and [12, various issues] for Taiwan.

Note: Tariff rates are computed by tariff revenue/imports.

TABLE III
IMPORTS-GDP RATIOS

	1970	1980	1990
Asia			
Korea	23.8	41.5	32.2
Taiwan	30.4	53.7	42.0
Singapore	122.5	216.7	184.0
Thailand	19.4	30.6	40.8
Malaysia	37.8	55.0	77.8
Indonesia	15.0	20.2	25.0
Philippines	21.0	28.5	33.4
India	4.5	10.1	10.8
China	2.5	6.7	14.6
Latin America			
Chile	14.4	27.0	33.7
Argentina	9.1	9.0	6.7
Mexico	9.0	13.0	16.7
Brazil	7.5	11.3	5.5
Colombia	15.9	15.6	13.7
Peru	16.0	22.3	10.6
Venezuela	16.2	21.8	19.3

Sources: [5, various issues] [11, various issues].

is notable for Taiwan, Indonesia, and Malaysia. In contrast, tariff rates in the Philippines and India have not shown any discernible declining trend. In India in particular, trade liberalization was set back during the 1970s. Despite several liberalization attempts since the mid-1980s, tariff rates in India are still high compared to the other countries.

Trade liberalization can also be seen from the figures indicating the share of imports in GDP, or the import share. Unlike the tariff rates, this indicator captures the effect of trade liberalization carried out not only by reducing tariff rates but also by removing non-tariff measures which are used extensively in developing countries. It should be noted, however, that the import share reflects not only the changes in trade regimes but also other economic factors such as the level of economic activities and the level of economic development. The changes in the import share in Table III indicate that the trade regimes have liberalized steadily in the ASEAN countries (except for Singapore), India, and China. In contrast, the import shares for the Asian NIEs increased during the 1970s, but they declined during the 1980s. The decline in the import shares for these countries appears to reflect a growing domestic supply rather than increased restriction on imports.

The previous findings indicate that the liberalization of foreign trade has been moving forward in the developing countries of Asia. A similar trend of liberalization can be seen for the policies toward inward FDI. Taking the ratio of FDI inflow to GDP, one observes a significant increase for most of the countries in Table IV. The rate of increase is particularly significant for Thailand, Malaysia, and Taiwan.

TABLE IV
INFLOW OF FDI TO GDP RATIOS

	1970	1980	1990
Asia			
Korea	0.82	0.01	0.30
Taiwan	0.01	0.10	3.35
Singapore	4.91	9.36	13.90
Thailand	0.61	0.58	2.96
Malaysia	2.24	3.74	5.50
Indonesia	1.44	0.17	0.90
Philippines	-0.37	-0.32	1.21
India	0.01	n.a.	n.a.
China	—	0.16*	0.96
Latin America			
Chile	-0.97	0.76	2.14
Argentina	0.05	0.43	1.93
Mexico	0.84	1.10	1.11
Brazil	0.34	0.80	n.a.
Colombia	0.60	0.46	1.22
Peru	-0.97	0.13	0.09
Venezuela	-0.17	0.08	0.93

Sources: [5, various issues] [11, various issues] [3, various years].

* For 1982.

The impact on productivity of foreign trade and FDI liberalization by Asian countries was examined at the overall macroeconomic level across countries as well as at the industry level for individual countries. The paper by Kawai in this issue examines the relationship between trade policies and growth in TFP by using the data covering not only developing countries in Asia and in Latin America but also OECD countries. The result of the analysis indicates that trade liberalization generally leads to productivity growth with a possible exception in the case of low-income countries. Specifically, using the magnitude of the contribution of export expansion to GDP growth and that of import substitution to GDP as proxies for trade liberalization, the analysis found that export expansion in most cases increased TFP growth, as expected, while import substitution resulted in the reduction of TFP growth, as expected only for the countries whose income level exceeds U.S.\$2,000, or middle- and high-income countries. Indeed, import substitution was shown to lead to increased TFP growth for low-income countries. This finding is important as it indicates that import protection appears to improve productivity for low-income countries, providing evidence to support the validity of the infant-industry protection argument. But once the countries reached the level of middle-income countries, import liberalization was found to improve productivity.

The results of cross-industry studies for the seven countries revealed that the impact of trade liberalization on TFP varies depending on the sample country. Unlike the cross-country study, the extent of trade liberalization is captured in

most cases by the changes in the level of protection which is measured by nominal and/or effective tariff rates. The impact of trade liberalization on TFP growth turned out to be positive for five countries: Korea, Thailand, Malaysia, Indonesia, and the Philippines, but their relationship is not always stable or statistically significant. By contrast, trade liberalization was shown to have negatively influenced TFP growth for Taiwan. The unavailability of data on India's protection measures precluded the India study from analyzing the effect of trade liberalization on TFP, but the study found that the TFP growth led to expansion in exports, probably indicating the favorable effect of trade liberalization on productivity.

The impact of FDI liberalization on TFP was analyzed quantitatively only for Taiwan and Malaysia because of data availability. The results from the Taiwan and Malaysia studies showed that increased inflow of FDI, resulting from FDI liberalization policies, contributed to the increase in TFP. It was particularly interesting to find that in Malaysia the level of TFP is higher for MNEs in comparison with local enterprises, but their gap has narrowed over time. This finding implies not only that increased competition improves technical efficiency but also that efficient technologies of MNEs are transferred to local enterprises through external economies, or spill-over effect.

The effect of competition from local firms on TFP was examined for Korea, Thailand, and India, where data necessary for such analysis are available. Using the market concentration ratio as an indicator of the level of competition, the studies for Korea and Thailand found that the lower the market concentration (the greater the competition), the higher the TFP growth. Furthermore, the industries which experienced a reduction in market concentration recorded higher TFP growth. For India, the share of value added of public enterprises in total sectoral value added, which was used to indicate the lack of competition, was shown to have a negative impact on TFP growth. These findings indicate the favorable impact of competition on TFP growth.

E. Remaining Issues

Successful economic development requires continued improvement in productivity, and therefore a study of the determinants of productivity such as those presented in this issue should prove to be important not only to researchers interested in economic development but also to policy makers engaged in formulating development policies. By analyzing cross-country data as well as cross-industry data for seven developing countries in Asia, the studies contained in this issue show that in general trade and FDI liberalization resulted in improving productivity, here measured by TFP. However, the effect of trade and FDI liberalization on productivity was not always stable or statistically significant.

Other issues in the study of the impact of trade and FDI liberalization on productivity which are important but are not dealt with in this issue include the followings.

First, an analytical model, from which the relation between trade liberalization and productivity may be derived, has to be developed. Lack of such a model results in ad hoc specification of the empirical model, which in turn makes

interpretation of the results ambiguous. Second, a detailed industry study should be pursued to complement the types of studies carried out in this issue. One useful question among many for such a study may be to ask firms if technical improvement was undertaken to deal with increased competition resulted from liberalization. A third issue is very much related to the second one. In spite of the difficulty in data collection, firm-level or establishment-level studies have to be carried out to examine the impact of policy changes, as it is these units that respond to the policy changes. Finally, it is desirable to increase the number of studies similar to the ones conducted in this issue in order to draw more general conclusions from larger samples.

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