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INDUSTRIAL POLICY IN EXPORT-ORIENTED ECONOMIES: LESSONS FROM THE EXPERIENCES OF JAPAN, SOUTH KOREA AND TAIWAN

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The paper describes the experiences of Japan, South Korea and Taiwan in their successful export-oriented development. A comparison of industrial policies in these three economies indicates that their governments actively and consciously intervene to influence specific firms and industries. However, most export incentives were administered uniformly across all industries. At the same time, incentives were granted based on output performance within a limited duration in an environment that encouraged policy reforms and market orientation.

Some of the important lessons to be learned from the experiences of these three export-oriented economies are the involvement of the private sector in the promotion of exports and the establishment of a system of export targets.

1. Introduction

Just recently, tariff reforms, relaxation of foreign exchange controls, import liberalization, the enactment of the Foreign Investments Act of 1991, and related policy reforms have rekindled the debate as to whether the government should pursue a selective industrial policy patterned after those of postwar Japan, South Korea and Taiwan.

This paper highlights the salient features of the experience of these three export-oriented economies. The expectation is to avoid the mistakes they committed and to learn from the desirable aspects of their successful performance in what is called a "fast-second strategy."

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The discussion below is organized as follows. After this introduction, Sections 2, 3 and 4 present a brief discussion of the industrial policies of Japan, South Korea, and Taiwan, respectively. A comparison of the experiences of Japan, South Korea and Taiwan is considered in Section 5. Section 6 concludes with a discussion of the fundamental lessons that can be drawn from the industrial policies of the three export-oriented economies.

2. The Experience of Japan

The postwar industrial policy of Japan can be divided into three phases: 1) reconstruction phase (1945-1960), 2) rapid economic growth phase (1961-1973) and 3) post-oil-crisis phase (1974 to the present).[1]

In the reconstruction phase direct government regulatory measures were employed. Resources were concentrated in key industries: coal mining, electricity, and steel manufacturing. Government intervened extensively in private economic activities by rationing any commodity in short supply as well as rationing and controlling foreign exchange and foreign capital. Key industries were developed by directly channeling into the government funds and allocating raw materials, foreign exchange and foreign technology. Publicly-owned financial intermediaries, such as Reconstruction Finance Corporation, Japan Export-Import Bank, and Japan Development Bank, were created in support of large-scale priority industries. Fiscal incentives such as special depreciation allowances and tariff exemption to key industries were also utilized. Furthermore, the dissolution of the family-held group of companies (the *Zaibatsu*) by the U.S. occupation forces increased the influence of the government in the economy. The division of big business and family-owned conglomerates created a competitive market structure and decision-making autonomy of corporate managers which led to the creation of new industries, introduction of innovations, and importation of foreign technology. In the first half of the 1950s the goal of international competitiveness was established in response to the deterioration of the balance of payments after the Korean War. The policy tools used to promote major industries (e.g., iron and steel, chemical fertilizer,

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[1]These historical phases and the following discussion are adapted from the work of Uekusa and Ide (1985) and Okuno-Fujiwara (1990). In addition, a more detailed explanation of the Japanese industrial policy is found in Eads and Yamamura (1987) and Uekusa (1987).

shipbuilding, electricity) were low interest loans, special depreciation, tax exemption of raw materials, tax-free importation of capital equipment, and exemption from real property tax. In the latter half of the 1950s, a new policy of promoting promising industries was adopted. Synthetic fiber, plastics, petroleum refining, patrochemicals, automobiles, electronics and machinery industries were targeted for government promotion and support. Special tax treatment, low interest loans, foreign exchange allocation, foreign technology importation, and government capital infusion were provided within the five-year production plan for these industries. Tariff and non-tariff barriers were also used to protect these industries from foreign producers. Government expenditures on social infrastructures were also increased.

During the rapid economic growth phase, Japan's economy had undergone a dramatic transformation from agriculture to manufacturing, and from light industries to heavy industries. Exports in heavy industries accelerated, and Japan's real GDP grew at an average rate of 11.6 percent between 1960 and 1970. Foreign exchange and trade liberalization were implemented in 1960, but the promotion of key industries through the use of trade protection, tax exemptions and subsidies continued. In addition, the government discouraged excessive competition in industries characterized by scale economies by promoting specialization in the production of certain goods, encouraging mergers, and by providing assistance to the rehabilitation of production facilities in order to exploit scale economies in the market. The implementation of trade and foreign exchange liberalization reduced the effectiveness of direct government intervention in the economy, and the potential entry of foreign competitors in the domestic market pressured domestic producers to raise productivity, improve product quality and upgrade production facilities. Trade liberalization in key industries was implemented in such a pace as to provide adequate time for such industries to take necessary measures to be ready to face foreign competition in both domestic and export markets. The role of government in Japanese industrial policy during this phase had gradually transformed from direct regulation to coordination and provision of information. Administrative guidance (*Gyosei shido)*, which suggests desirable directions, advice and encouragement rather than direct intervention in pricing, production and investment aspects, became the dominant policy tool for influencing corporate decision-making. By the latter part of this phase, the success of the rapid growth strategy brought with it problems of pollution, rapid urbanization, and personal

alienation. Japan's consistent balance of payments surplus also created trade frictions with its industrialized trade partners, particularly with the United States, and later with the Western European countries.

In the post-oil-crisis phase, the goal of industrial policy shifted from giving priority to maximum economic growth towards the improvement of social and economic performance. The appreciation of the yen and the increase of the price of oil during the 1974-75 and 1977-80 periods created some problems for many heavy industries which were energy-intensive and export-oriented. Thus, there was a need to formulate a policy to provide adjustment assistance to troubled industries as a result of this structural change in the economy. The two most important adjustment mechanisms used were: (1) the establishment of joint credit funds to purchase scrapped facilities with bank loan guarantee for the disposition of excess capacity, and (2) the establishment of capacity-reduction cartel in designated industries. There are doubts expressed as to the effectiveness of these tools in achieving the goals of industrial policy. However, it must be stressed that it is misleading to consider the guarantee program as ineffective on the basis of direct evidence on firms' availment of this facility simply because Japanese adjustment assistance policies are not very transparent. It was in this phase when industrial policy had increasingly relied on market-conforming mechanisms, and less on active protection and direct regulatory tools. Industrial policy during this phase likewise encouraged the evolution of a knowledge-intensive and energy-saving instead of capital-intensive and energy-consuming industrial structure. High-technology fashion, information-processing and electronics industries provided the core of this emerging industrial structure. Promotion of international cooperation, settlement of trade frictions, and encouragement of research and development in high-technology industries were the other goals stressed. Administrative guidance was becoming less effective not only because few Japanese firms needed direct assistance, but also because the international economic environment was highly sensitive to any (overt or covert) government support of private business activities. Thus, the government emphasized its role as the coordinator of the process of consultation and consensus formulation. The government's provision of information to industry on future trends in industrial structure, technological innovation and international relations through published reports called "visions" or "plans" provided a useful guide to particular firms and industries in formulating their strategies and agenda for action.

3. The Experience of South Korea

The South Korean economy went through a series of adjustments due to the dislocations caused by partition and the Korean War, following the end of the Japanese occupation. In the 1950s, its economy was considered a basket case. The share of exports in GNP was only 1.4 percent in 1955, 2.4 percent in 1960, and 5.2 percent in 1965. And the share of manufacturing in GNP was only 8 percent, 11 percent, and 14 percent in 1955, 1960, and 1965, respectively. Primary products (seaweed, ginseng and various minerals) dominated its exports (Westphal and Kim, 1977). However, after 1965, the growth of manufactured exports accelerated, and manufactured products accounted for 74 percent of total exports in 1975. Compared to its 1965 level the share of exports in GNP increased by approximately seven times in 1980 (33.1%), 1985 (35.8%) and 1990 (37.5%). It is therefore interesting to describe the features of South Korea's industrial policy which contributed to its rapid economic growth.

In the early 1950s, South Korea followed an import-substitution industrialization strategy. The domestic market was heavily protected by the use of import controls and a multiple exchange rate system — rates varied depending upon the type of import and the source of foreign exchange. However, instead of allocating foreign exchange in terms of a preset criterion such as "essential import requirements of priority sectors," bureaucratic discretion in foreign exchange allocation was somewhat lessened by allocating foreign exchange through lottery, auction, bidding procedures, and exchange tax system. Quantitative restriction on imports was adopted to partially counteract the overvaluation of the currency; imported consumer goods which were adequately provided by local substitutes were imposed high tariffs, low tariffs on unfinished goods, and reduced tariffs on products not produced in South Korea. Only imports of food grains, non-competitive equipment, and raw materials were duty free. Import-substituting industries were granted complete tariff exemptions on imports of machinery and intermediate goods. A system of reviewing and modifying the licensing system every six months to adapt to the balance-of-payments situation was implemented (Westphal and Kim, 1977).

Realizing that opportunities for consumer goods-based import substitution were already exhausted in a limited domestic market, South Korea embarked on an export-oriented industrialization

strategy in 1964.[2] A package of reforms was adopted: devaluation, expansion of export incentives, relaxation of trade controls, and gradual import liberalization. A unified exchange rate was initially tried in 1961, and finally established in 1964. The following are the specific incentives employed by South Korea to promote exports: conversion of export earnings into foreign exchange certificates which could be traded in a free market at a premium[3], privilege to import prohibited items through export earnings, loans at preferential rates, direct cash subsidies, tax exemption of imports of intermediate goods used in the production of exports, increase in the amount of borrowing on a given volume of exports, reduction in the business income tax rate on foreign exchange earnings, exemption from indirect taxes on inputs and export sales, tariff exemptions on imports of machinery and equipment, accelerated depreciation, preferential access to foreign exchange loans, generous wastage allowances[4] for imported inputs in export production, and reduced rates on public utilities. Few of these incentives were temporarily offered to increase exports for those ventures with low profit margins or to develop new export markets. But most of them were administered uniformly across all industries. Furthermore, all these export incentives were extended to producers of indirect exports starting in 1965.[5] It has been indicated that the combined effect of these export incentives has been largely neutral. However, non-neutral policies, such as import controls and privilege of temporary monopolies, were applied by the Korean government for three decades in order to promote targeted infant industries such as cement, fertilizer, petroleum refining, steel, petrochemical, shipbuilding, other chemicals, capital goods, durable consumer items, electronics and computers. The promotion of the infant industry had led to the emergence of huge conglomerates, or *Chaebol*.[6]

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[2]Bruton (1989) argues that South Korea did not shift its industrialization strategy from import substitution to export promotion, but pursued both strategies hand in hand.

[3]Ordinarily, exporters were required to surrender to the Central Bank their foreign exchange at the official exchange rate.

[4]Wastage allowance subsidy is a system of subsidizing exports with a very limited domestic market by allowing them to sell some of their duty-free imported inputs to related industries in the domestic market.

[5]Indirect exports refer to intermediate goods used in the production of exports. Westphal and Kim (1977) argue that the extension was designed to encourage the domestic production of raw materials used in exports, and to offset the bias in favor of duty-free imported raw materials.

[6]Just recently, the Korean government has exerted efforts to curb the economic power of the *Chaebol*: it has forced the *Chaebol* to shed excess real estate held mainly for investment, to concentrate on a limited number of business lines, to replace their familiy management with professional executives, and to curb the growing economic power of owning families by limiting transfers of wealth between generations.

The government evolved a market structure by controlling the inflows of foreign investments and foreign technology and by constraining the emergence of entrants in each industry. Vertical integration and local content regulations were imposed on various industries. Selective intervention has been considered a major factor in South Korea's remarkable success, particularly in its export performance and in its achieving and maintaining international competitiveness in a variety of industries (Westphal, 1990).

4. The Experience of Taiwan

The Republic of China or Taiwan, just like South Korea, followed an import-substitution industrialization strategy after the Second World War, and shifted to the export promotion strategy in the late 1950s as it experienced sluggish growth and balance-of-payments difficulties. Before 1960, Taiwan's inward-looking policies relied heavily on tariffs and quantitative restrictions to provide high levels of protection to domestic industries against imports. This system of protection not only created a bias against exporting manufactured goods, but also penalized the agricultural sector by the resulting high prices of inputs and overvalued exchange rates. The export orientation of the Taiwanese economy started in August 1959 when a single exchange rate replaced the multiple exchange rate structure. Then a series of reforms followed: import liberalization, removal of prior deposit requirement on import applications, encouragement of foreign investment, liberalization of policies regarding the establishment of new firms in existing industries, and creation of development finance institutions such as the Industrial Development and Investment Center and the China Development Corporation. The following comprise the system of incentives utilized by Taiwan to promote exports: retention of foreign exchange earnings for the purchase of raw materials and machinery subject to import permits, privilege of selling imported raw materials to other firms, exemption from the business tax and the stamp tax, deduction of two percent of annual export earnings from taxable income, preferential interest rates on loans to finance imported raw materials and machinery used in exporting, export insurance by a government agency, rebates of customs duties and of indirect taxes on imported raw materials and components used in export production. Selective intervention policies were also employed by Taiwan. For instance, direct subsidies to exports in targetted industries such as cotton spinning and rubber products were made. Support services to exporters like the provision of assistance for market research were likewise extended by the

government. Industrial estates and duty-free economic zones for processing of imported materials were also established (Balassa, 1971).

5. Comparison of Japan, South Korea and Taiwan

Japan, South Korea and Taiwan have some key similarities in important policy-related areas: (1) The three countries faced natural-resource constraints and had similar initial conditions on the eve of their economic take-offs; (2) all of them experienced successful land reforms partly due to the existence of military threats from aggressive adversaries – USSR, North Korea, and China, respectively; (3) most of the time, the three countries enjoyed considerable social and political stability; (4) their governments provided favorable and risk-free climate for investments and were strongly committed to economic development as a national goal; (5) all of them adopted consistent and continuous policies; (6) the presence of strong central and local governments willing and able to formulate strong supportive measures: indigenous technology, efficient bureaucracy, and responsible elite, existed in these countries; (7) all of their governments did not compete with the private sector, and engaged in direct production only in areas where private initiative was lacking initially such as social infrastructures and heavy industries; (8) vested interests in import substitution were less important in Japan, South Korea and Taiwan; (9) all countries successfully shifted to export-promotion from import-substitution industrialization policies by adopting realistic interest rates, unified exchange rates, import liberalization, and export incentives (Lau, 1990; Rosovsky, 1972; Balassa, 1971).

In both performance and policy, Japan plays an important role model for South Korea. For instance, the role of Japan's *Zaibatsu* in the development of technologically more sophisticated industries, exploitation of scale economies, and mobilization of scarce capital resources is duplicated in South Korea's *Chaebol* which functioned as the government's vehicle in administering export incentives, undertook export marketing activities, and implemented the national government's development thrust (Rosovsky, 1972; Westphal, 1990). Thus, the strong government-business relations in both Japan and South Korea created a highly concentrated industrial structure. In contrast, Taiwan's income distribution was more equitable during the period of rapid growth, 1976-1981. The reasons for this performance were Taiwan's policies to ease entry for small and medium enterprises to encourage livelihood enterprises through tax policies

aimed at redistribution, to limit excessive profits, and to promote social welfare, health and education spending to benefit the poor and the disadvantaged. In both Japan and South Korea, social welfare programs were not given a considerable degree of importance until after the rapid-growth periods in these respective economies. Japan and South Korea set preferential interest rates, but Taiwan set interest rates at close to market-clearing rates. Compared to the two countries, Taiwan promoted the export-oriented industrialization strategy by setting an exchange rate close to the market-clearing rate. On the other hand, Japan and Taiwan had similarities in terms of stability of output and inflation rates, while South Korea's monetary policies had resulted in less stable prices and outputs. Furthermore, of the three countries, South Korea was the one that had to devalue its currency several times between the mid-1960s and the early 1980s. From the point of view of development finance, foreign capital and multinational enterprises played a negligible part in Japan's experience, Taiwan utilized international borrowing sparingly, and South Korea relied heavily on foreign borrowing to finance investments. The most fundamental difference between Japan, South Korea and Taiwan lies in what role the government should play. In Japan and South Korea the government took a very active role in controlling private enterprises in the early phase of its development. In contrast, Taiwan provided an economic environment not only conducive to growth but also one which was to promote the proliferation of small and medium enterprises. It also established market-clearing interest rates which limited excess profits of business firms, thereby discouraging the growth of large enterpries (Lau, 1990; Rosovsky, 1972).

6. Lessons

The remarkable economic performance of Japan, South Korea and Taiwan demonstrates that trade restrictions are not necessarily inferior to free trade. In fact, Pack and Westphal (1986, p. 117) argued that, "in the absence of perfect tradability, restrictions to promote the acquisition of technological capability can be superior to free trade, since the acquisition of technological capability can lead to lower prices and to differentiated products that would not otherwise exist."

The four common factors that have been identified to explain the economic success of Japan, South Korea, and Taiwan are: reliance on private enterprise, establishment of the rule of law in the economic sphere, the existence of domestic and international competition, and

the creation of specific institutions to improve technological import capabilities (Lau, 1990; Rosovsky, 1972). Private monopolies exist if there is reliance on private enterprise but without competition. On the other hand, the governments of Japan and South Korea had applied a strong influence on the market by deciding how many firms there should be in a given industry through rationalization and structural adjustment programs. Recently, voluntary adjustment policies in Japan have been managed through the industry council, an advisory group to the government and composed of representatives from industry association, media, government, labor, academe, financial institutions, and subcontractors, which designs a voluntary scrapping plan in the distressed or declining industry together with government assistance such as providing low-interest financing through government financial institutions (Uekusa, 1987). In addition, the Japanese system of permanent employment was responsible for technological and organizational progress, even the labor-saving type, and for the incentives to invest in human resource development by Japanese entrepreneurs (Rosovsky, 1972). Furthermore, Japan's Ministry of International Trade and Industry (MITI) plays a major role in the economy by coordinating the process of consultation and consensus formulation (Eads and Yamamura, 1987).

One of the important lessons from the South Korean experience is the involvement of the private sector in the promotion of exports. For instance, the government authorized the Korean Traders' Association to collect one percent of export sales to support export-marketing activities. Another lesson is that direct foreign investment accounted for less than 5 percent of capital stock in Korean manufacturing in 1970, but between 1960 and 1975 approximately 40 percent of total investment was financed from abroad. In South Korea further lessons in the use of foreign capital are: (a) the efficient use of foreign capital and (b) foreign capital availability as a response to favorable export performance. Another lesson is the role of export targets in explaining South Korea's successful export performance. In 1962, South Korea established a system of export targets for individual firms in particular markets, broken down quarterly and by product and destination. The targets were initially set jointly by the government and the various exporters' associations and were revised upwards periodically based on recent trends, and were almost exceeded. The important lesson from South Korean experience is that a successful export promotion policy needs not only export incentives but also a system of export targets. Furthermore, export monitoring is done daily by the Korean Ministry of Commerce and Industry which maintains an "export situation room" and is in

constant contact with the major exporters to anticipate difficulties in meeting targets. In addition, the President of South Korea actively participates in a periodic review of export performance and targets at a monthly Trade Promotion Conference attended by ministers, bankers, and successful small and large exporters. Another lesson from the South Korean experience is the administration of the tariff-exemption incentives: tariffs on imports for export production were paid at the time of importation and then rebated at the time of export (Westphal and Kim, 1977; Westphal, 1990).[7]

Another policy used effectively by South Korea is local content regulations which require various industries to source an increasing share of their inputs from domestic sources. The government identified a selected number of medium-scale firms to develop as suppliers of particular inputs to designated final product manufacturers. The South Korean experience in selective intervention to promote strategic industries is, strictly speaking, quite selective in terms of being narrowly focused (Westphal, 1990). Contrast this with the Philippine policy of Investment Priorities Plan (IPP) which contained 261 areas in 1990 and 95 areas in 1991.

The important lessons from the South Korean experience in the late 1970s when its development of heavy industry was least successful are identified (Westphal, 1990) namely: (1) the overriding objective must be the achievement of international competitiveness within an explicit medium-term time horizon; (2) information relevant to judging potential comparative advantage must be sought continuously from every possible source: adequate consultation with knowledgeable individuals and with private industry; (3) detailed industry-specific strategy should be reformulated as needed to reflect pertinent information and experience acquired during the course of implementation; (4) only a small number of industries should be targeted at any one time; and (5) the government's intervention should not overly constrain the exploitation of comparative advantage in well-established industries.[8]

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[7]In contrast, the Philippines switched from investment incentive based on performance (e.g. BP 391: Investment Incentive Policy Act of 1983) to one based on entry (e.g. EO 226: Omnibus Investments Code of 1987).

[8]In the South Korean experience, Westphal (1990, p. 57) pointed out that well-established industries "were excessively crowded out of the markets for labor and capital in the late 1970s by the large demands of the targeted infant industries" which sharply reduced export growth.

Finally, the experience of Taiwan shows that both growth and equity can prevail in an environment which does not encourage large enterprises and where a government puts strong efforts to let market forces take their course after laying down the fundamental measures for an economic take-off. The most fundamental lesson from the three export-propelled economies deals with the administration of export incentives — availment of incentives was subject to a definite time horizon and was based on performance.

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