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Development strategy in Korea reexamined: an interventionist perspective

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Abstract

This article reexamines the controversial issue of development strategy in Korea. Two conflicting views on the Korean development experience are introduced. The key questions discussed herein include the following: Which perspective outperforms the other in its explanatory power? If government did play a pivotal role in Korea's development, what exactly are the essential features of that role? This article confirms the interventionist notion that the successful economic development of Korea was mainly rooted in the aggressive role of government. Korean policy has strategically changed in direction but not in degree. Carefully sequenced "target shifting" and "constant upgrading" by government were the ultimate sources of Korea's outstanding economic performance in the early stages of development. © 2001 Elsevier Science Inc. All rights reserved.

1. Introduction

Two lines of thought exist in interpreting the ultimate sources of Korea's successful economic development. One emphasizes the market oriented nature of its economic regime while the other focuses on the role of government in its development process.¹

Pure neoclassical economists assert that the market, not the government, occupied center stage in Korea's economic development. Government, according to them, played only a minor role. These free market advocates are skeptical about the claim that the government can be somehow more efficient than the market, regardless of the development stage. They tout small government over big government, and point to the victory of market over state as

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evidence. The assumption is that if government stands aside from matters not requiring its immediate attention, things are done better.

In this view, as also suggested by the World Bank (1993), Korea's successful development has been due to several key factors such as, the efficient allocation of inputs based on static comparative advantage, an incentive-neutral policy scheme, international competition, roughly competitive factor markets, a stable macroeconomic environment, low relative price distortion, and high investment in education and health. Since sustained export growth is possible only when a country specializes in products of lower opportunity cost in the international market, export promotion can maximize allocative efficiency (Balassa, 1982; Wolf, 1988).

In the empirical arena of the subject, this type of liberal rationale has generated many studies trying to connect the shrinking role of government to economic success. For example, many economists believe that the excellent performance of the Korean economy in the late 1960s was mainly due to competitive pressures raised by trade liberalization and realistic capital prices created by interest rate rationalization. They also widely accept the view that the HCI (heavy and chemical industries) drive in Korea during the 1970s was a good example of how the state can seriously misallocate resources. Again, the more liberalized policy regime of Korea during the 1980s was related to better economic performance over the same period.

The other line of thought places more weight on the role of government (Amsden, 1989; Wade, 1990; Jones & Sakong, 1980; Leudde-Neurath, 1986; Porter, 1990). According to this view, Korea's rapid economic development is referred to as being literally 'government-pushed'.

During the early stages of economic development, the domain of government intervention was expanded to the discretionary allocation of financial credit, the nationalization of strategic industries, and choosing the winning industries tactics. These interventionists believe that Korea's unusually rapid export expansion was possible mainly because the government, through a series of five-year economic plans, nurtured certain sectors to become future export industries by providing fiscal and financial export incentives, and tariff as well as non-tariff import barriers. The policies implemented in Korea were more productive than those employed in other developing economies (Thomas & Wang, 1996). Amsden (1989) found that Korea differed from most other developing countries in the discipline its state exercised over private firms. She showed how government has repeatedly acted as the entrepreneur in the Schumpeterian sense. Wade (1990) argued similarly for the case of Taiwan.

The Korean government, indeed, has acted as an entrepreneur to induce desirable private investments for the targeted sectors. Government artificially provided rents to guarantee the entrepreneurial profits, which the market mechanism could not provide. As Chang (1993, p.145) correctly pointed out, "the state, as the ultimate guarantor of property rights, had to create some 'restraints of trade' and provide rents to those who were developing new industries (or even set up those industries itself)." In theory, the infant industry argument has been cited as justification of government intervention. By not only correcting market failures but also systematically steering prices wrong, government led the market. Lack of information, an imperfect credit market, scale economies, externalities, lack of risk markets, and

coordination problems were frequent causes of market failures and particularly common in the early stages of development (World Bank 1993). Without the government's 'leading the market', the achievement of rapid industrial development and accelerated economic growth would have been simply unattainable.²

Before going into detailed analysis on the topic, it would be useful to define key words commonly used in the discussion, that is, 'industrial policy', 'industrial targeting', and 'export incentives'.

2. Definitions

Industrial policy is directed towards successful economic growth by stimulating the supply-side of industrial activity. Objectives of the policy are: 1) strengthening international competitiveness; 2) modernizing the industrial structure; 3) an achievement of dynamic comparative advantages by promoting rapid growth of potential industries, and 4) correction of market failure. It takes the form of resource allocation by the government. As will be defined by Franco, Eguren and Baughman (1988), in nature, it is long-term, dynamic, and structural. With regard to the timing of the policy, it has been more emphasized in less developed and/or less competitive periods. Germany in the 19th century, Japan after WWII, and more recently, developing countries like Korea and Taiwan are good examples.

Yet, industrial policy is a broad, flexible, and vaguely defined term. Countries in different development stages can have different industrial policies. Franco et al. (1988) defined industrial policy as, 'the sum of a nation's efforts to guide and shape business activities to foster economic growth. Thus, its concerns are with the long-term structural integrity and growth of a country's industrial base.'

The main content of industrial policy can be divided into three categories, 'industrial targeting', 'upgrading of industrial structure', and 'industrial organization policy'. Industrial targeting means to bring up selected industries, which have future international competitiveness.

U.S. ITC (1985) defines industrial targeting as, 'industrial targeting means coordinated government actions to direct productive resources to help domestic producers in selected industries become more competitive.'

Three major elements in this definition are: 1) coordinated government action; 2) direction of productive resources; and 3) targeting of only selected industries for the purpose of providing domestic producers with competitive advantage.

According to the scope of the target, Adams and Bollino (1983) divided industrial policy actions into four categories:

- 1) General industrial policy (GIP). GIPs are intended to apply on equal terms to all industries of the economy. These include broad policies aimed at improving the resource allocation mechanism, or encouraging investment or R&D
- 2) Sector-specific industrial policy (SSIP). SSIPs are policies directed at specific sectors of the economy; for example, manufacturing as a whole as opposed to agriculture.

Policies of export-industry promotion and import substitution can be also included in this group.

- 3) Industry-specific industrial policy (ISIP). Industrial policies are often directed at specific industries, defined broadly or narrowly. For example, the government may aim at developing the steel industry in general, or it may intend to assist the high-tension carbon steel making section of the steel industry.
- 4) Firm-specific industrial policy (FSIP). Industrial policies may also be designed to assist particular firms (or projects). Government assistance directed toward specific firms that are in the process of developing particular products or technology falls into this category.

Upgrading of industrial structure includes modernizing the industrial structure considering its forward and backward linkage effects. Industrial organization policy includes promoting effective competitiveness in monopolistic markets. Industrial targeting can be part of the way to achieve upgrading of industrial structure. In developed economies, industrial organization policy is the main focus of industrial policy while targeting and upgrading are essential in developing countries. The governments of less developed economies have tried hard to adopt special policies that will accelerate industrialization. Thus, the purpose of industrial policy in less developed countries goes far beyond the simple correction of market failure. The presumption is that even in the absence of market failure, a less developed economy desperately needs aggressive government intervention to speed up industrial growth and structural transformation.

The means of industrial policy include: 1) pecuniary incentives such as policy loans, tax, tariff, and production subsidies; 2) nonpecuniary controls such as licensing, quotas, entry barriers and indicative cartels; 3) various regulations on production standards, facility standards, and environmental criteria; and 4) provision of useful information by government to facilitate overseas operation, render technical assistance, and to engage in joint R&D projects.

In Korea, export driven economic growth has been the main theme of economic development. The Korean government aimed at developing those industries, which have long term export potential. In other words, industrial targeting was focused on the exporting sector in the context of dynamic comparative advantage. Thus, all the means of industrial policy (pecuniary, nonpecuniary, and informational incentives) were directed towards increasing the volume of exports. When the means of industrial policy are directed towards the exporting sector, they become so-called ‘export incentives’. Smith (1991) suggested a full list of export incentives in Korea.³ He argued that “the scope and pervasiveness of the nineteen major types of intervention listed here should dispel the myth that Korea succeeded by allowing the free market to work (Smith, 1991, p. 15).”

3. Policy reform controversy of the 1960s

The history of Korea’s industrial policy can be divided into three phases: 1) the take-off phase between 1962 and 1973; 2) the heavy and chemical industry promotion phase between 1973 and 1979; and 3) the liberalization phase since 1979 (World Bank, 1987).

The initial industrialization phase (1962–1973) was composed of two complementary strategies, import substitution of nondurable consumer goods and intermediate materials (1962–1966) and export promotion of labor intensive products (1967–1973).⁴ Industrial policy in this stage was as much import-substitution-oriented as export promotional.⁵

This phase also covers the First and Second Five-Year Economic Development Plans (1962–1971). The adoption of a labor-intensive strategy by the Korean government in this phase seemed to be natural and neoclassical to many economists since it followed Korea's static comparative advantage. It was also expected to generate full-employment and upward pressure on wages, thereby achieving a redistribution of income (Ranis, 1978). Neoclassical economists, attempting to find the sources of Korea's successful economic growth in its trade orientation, argued that Korea was a free trade regime (Westphal & Kim, 1977; Ranis, 1978; Balassa, 1982).

The evidence that these economists often cited was a series of policy reforms in Korea around 1965. According to them, the trade liberalization policies adopted by the Korean government at that time significantly improved the performance of the economy. After surveying 374 commodities in Korea, Westphal and Kim (1977) concluded that Korea in 1968 operated a 'free trade regime'. They classified 244 items out of their total sample of 374 as nonimport competing (i.e., commodities to which prohibitive tariffs are applied to.). Luedde-Neurath (1986), however, argued against this neoclassical interpretation of the Korean economy. He criticized Westphal and Kim in that their evidence actually revealed the fact that Korean imports were tightly restricted by the government. Luedde-Neurath (1986) added a further 51 items, which were classified as 'export' commodities, and concluded that 78.9% of Westphal and Kim's sample was subject to prohibitive tariffs. He also provided detailed and comprehensive description of the protectionist policies in Korea.

Westphal (1990) criticized Luedde-Neurath's approach, claiming that it was overstated and misguided. Westphal noted the fact that imports in Korea have grown almost as rapidly as exports, which implies that Korea's export oriented development strategy entailed immense openness to imports of capital goods, raw materials, and intermediate inputs.

If the neoclassical interpretation of the rapid growth of the Korean economy as a free trade regime is valid, it should also be able to answer the question why this experience has not been replicated by other developing countries who were willing to be outward oriented. Even though we fully accept the argument that the successful promotion of exports has been primarily responsible for Korea's transformation from a poor economy into a middle income country, we still cannot answer why and how Korea exported that successfully while others could not (Park, 1991).

Burch (1987) mentioned that successful development has little to do with the 'market oriented character of the countries concerned. He pointed out that the prior establishment of a more egalitarian system by the postwar land reform in Korea along with the favorable but temporary conditions in the international economy in the take-off stage was the unique and essential factors in the rapid growth of the Korean economy. It is true that Korea's export take-off was facilitated by a general expansion of world trade. Yet, no clear answer can be found from Burch (1987) as to why this international condition favored only a group of countries. Moreover, if the egalitarian condition is a prerequisite condition for the successful take-off, how can we account for the irrelevance of socialist strategies of development? Also,

the assertion that poor natural resources, massive foreign aid, and Confucian heritage at the initial stage helped the take-off of the Korean economy raises more questions than it answers (Lim, 1994).

The Korean experience for the last three decades demonstrates the relevance of the interventionist approach (Amsden, 1989; Porter, 1990; Wade, 1990; Jones & Sakong, 1980; Park, 1991). In the take-off stage, the Korean economy 'seemingly' looked like a free trade regime. This misconception stemmed partly from the fact that the specialization of the Korean economy in the international market looked as if it was following its comparative advantage. In this phase, the primary goal of nearly all economic policies in Korea was the export promotion of whatever products possible, which turned out to be labor intensive. Even though it is ultimately an empirical question to be answered whether the export increment of labor intensive goods in the take-off phase was caused by the 'pure factor endowment condition' in Korea or the Korean government's strategic intention, there is abundant evidence which shows how government provided a variety of incentive schemes for export expansion.

A wide range of export incentives has been introduced by the government since the early 1960s. The most important means of implementing the government's objectives was 'policy loans' (Balassa, 1990; World Bank, 1987, 1993; Kim, 1990; Cho, 1990; Choi & Kwack, 1990; Park, 1991; Chang, 1993), which accounted for 57.9% of total bank loans made between 1962 and 1987. The government maintained a ratio of 'policy loans' to 'total loans' of well over 50% during the period 1963–1985 except for the years 1968–1972 and 1974. It has been over 60% in the 1980s and 70.5% in 1985 (Lee et al. 1987).⁶ As in most other developing countries, credit allocation in Korea was tightly controlled by the government. A large share of financial resources was directed towards the desired sectors by the government. Considering the fact that Korean firms' average equity ratio over total assets was only 22.2% in 1986, the availability of financing was critical for firms. This ratio was far lower than that of American firms (47%), Taiwanese firms (46.8%), and Japanese firms (28.3%) (Chang, 1993). Several promotional laws were also legislated in the latter half of the 1960s to initiate and support the selected sectors: machinery and shipbuilding (1967); electronics (1969); iron and steel (1970); petrochemicals (1970); and nonferrous metals (1971). A number of specialized credit funds were established by these laws to supply policy loans to preferred industries. Incentives such as wastage allowances, special utility rates and direct tax reductions were included in the list of export subsidies too, although they were not major parts of the subsidies. Tariff exemptions were also introduced as part of the scheme.

The argument of the free market advocates that the incentive system during this period had remained neutral is not consistent with reality. Instead, the evidence is more consistent with the conceptual framework of 'development path' in Porter (1990). This first phase of development in Korea appears compatible with the 'basic factor driven stage' in Porter's argument (Porter, 1990). Unskilled or semiskilled labor was the best available source of comparative advantage in this phase.

If efficiency gains from free trade are an important source of economic growth (Krueger, 1980), these gains need to be maintained as long as the country specializes in the commodities where comparative advantage exists. In practice, however, the comparative advantage of a nation is strategic in its nature, and dynamic in its time dimension. Beginning in 1963,

Korea's economic growth rate averaged 9.8% for the rest of the decade. But the situation looked somewhat unpromising to the Korean government: First, China, India, and the Southeast Asian countries were rapidly expanding nontraditional exports. This gave rise to the prospect that Korea would soon lose its export markets of labor intensive products. Second, in the early 1970s, protectionism was rising in the industrial countries and it was mostly directed against labor intensive manufactured products from developing countries. Third, the trade balance was worsening during the first phase since the dependency of exports on imports was rising over the same period. The dependency of the Korean economy on imports was too high because domestic heavy and chemical industries were underdeveloped. Lastly, the ratio of firms' net worth to total assets stood around 50% in the mid-1960s, and declined to 20% by the early 1970s. It was hard for the government to expect any long term, large-scale investment from these financially unsound firms. Under these circumstances, sticking to the static comparative advantage constituted a 'basic factor driven trap' to Korean policy-makers. Designed in part to accelerate structural changes in the comparative advantage of the Korean economy, they adopted the HCI (heavy and chemical industries) drive. Since the transition of an economy from one stage to another is not automatically achieved in a short period of time, the state actively initiated the opening of a new 'investment (or capital)-driven' era along the development path described by Porter (1990).

4. HCI drive and its performance

The second phase (1973–1979) can be characterized as an 'industrial deepening' period in Korea. Although the promotion of heavy and chemical industries had already been included as one of the objectives in the Second Five-Year Plan, the switch to a more industry specific development strategy was made in 1973. Six strategic industries were designated for active promotion: steel, nonferrous metals, shipbuilding, machinery, electronics and chemicals. The criteria for the selection of these industries included: 1) forward and backward interindustry linkage effects; 2) value added inducement effects and, hence, contribution to GNP growth; 3) foreign exchange earnings or saving effects; 4) the utilization of domestic natural resources; and 5) the availability of foreign capital for the particular industries to be chosen. Selected industries had to be of such a size as to exploit large economies of scale for production efficiency.

As mentioned by Lim (1994), the most important source of output growth in developing countries has been increases in capital stock. Paul Krugman (1995) argued that there had been no economic miracle in Korea since its growth had largely been achieved through a simple accumulation of production factors. According to him, what were behind the rapid growth in Korea were 'merely' heavy investment and a big shift of labor from farms to factories, rather than from productivity gains based on technological advance. However, a study by UBS (1996) showed that Krugman's argument is subject to serious measurement problems. Moreover, rapidly increasing investment was itself an achievement, and in the midst of heavy investment, there was the leading role of state.

The Korean government adopted definite and discriminating measures to induce private investment and support selected industries, and those included: 1) export loans at preferential

interest rates; 2) accelerated depreciation; 3) production funds for exporters; and 4) tariff exemptions, and reduction rebates on the imports of capital goods, intermediate inputs, and raw materials not locally produced.

The Korean government was decisive in building a more advanced capital intensive industrial structure. Part of the confidence that the Korean government showed during the HCI drive period came from the increased ‘advanced factors’ in Korea that were mainly created during the 1960s. In the second phase, the Korean government was deeply concerned about the scale economies of the ‘right industries’ they picked. To achieve the minimum efficient scale in production, these industries desperately needed output expansion through overseas demand. Thus, export promotion was maintained as a high priority throughout the 1970s even though the ‘target sectors’ were shifted from ‘the labor intensive’ towards ‘the capital intensive’. Private sectors could not invest in large scale, long-range businesses because of their limited financial resources and unwillingness to take the risks of investment. Thus, the Korean government artificially created ‘rents’ to induce investment into these ‘rising sectors’ by restricting new entry into these markets and providing the favorable loans necessary.

The HCI drive policy obviously caused the capital inefficiency problem (underutilized capacity problem) of the 1970s. Neoclassical economists regard the HCI drive policy as a good example of how a policy that deviated from the neutral incentive scheme fails and ‘neither the static comparative advantage nor any other criteria could have justified the heavy investments made in these industries (Park, 1991). It is noteworthy, however, that the increases in Korean exports in the 1980s have been most visible in such products as consumer electronics, semiconductors, other computer related products, telecommunication equipment, and passenger cars. These were the products of heavy industries that were greatly favored under the industrial policy in the second phase.

In view of the experience of the 1980s, the HCI drive in Korea seems to be working with time lag. The World Bank (1987) and Chang (1993) are also attentive to the improved HCI performance of the 1980s. After examining Korea’s comparative industrial performance from 1979 to 1988, Chang (1993) argued that the HCI program in Korea was far from a failure. According to Chang’s study (Chang, 1993), the annual real growth rate of heavy industries in Korea for the years 1979–1988 was 17.2%, and that of chemical industries over the same period was 7.5%. Compared to the corresponding figures of Brazil (0.6% and 2.6% respectively) and Mexico (2.7% and 3.4% respectively), these figures bear out the improved and lagged HCI performance of the 1980s. When the HCI program was introduced in 1973, the target share of the exports of HCI over all exports was 50% by 1980. This target could not be reached by 1980, but only a few years later in 1983, the share reached 56%, exceeding the original target.⁷ The development strategy during the second stage in Korea was unique in that the government strictly controlled the capital market and placed strong limits on direct foreign investment.⁸ Contrary to the cases of Malaysia, Singapore, and Thailand where banks are privately owned and exercise independent authority over lending, the Korean government tightly controlled the allocation of credit by public commercial banks. Directing credit to specific sectors and firms through public and private banks has been one of the key means of achieving policy objectives (World Bank, 1993). Big firms involved in these strategic sectors were the main beneficiaries of massive ‘preferential financing’.

Unlike Brazil, where many capital-intensive sectors are largely foreign-owned, the Korean government carefully pursued indigenous technological development.⁹ Though the legal bases for direct foreign investment in Korea was made in 1960 by the enactment of the 'Foreign Capital Inducement Promotion Act', it was only after 1965 that the inflows of DFI in Korea began to grow. Korea normalized its diplomatic and economic relations with Japan in 1965. The average share of foreign direct investment in total foreign capital inflow(except foreign aid) between 1962–83 was a mere 5% (Amsden, 1989). The average inflow of foreign direct investment during the Second Five-Year Plan(1967–1971) was \$43 million. The inflow of DFI increased rapidly during 1971–1973, stagnated until the end of the 1970s, started to grow again since the early 1980s, and accelerated significantly during 1987–1988. The overall average share of DFI in long term capital inflow in Korea was about 5% in the late 1970s and increased to over 30% in 1988. The corresponding figure for Singapore was about 60% in the 1980s and about 70% for Taiwan for the same period(Hyun, 1993). Only 6% of MNCs in Korea are wholly owned subsidiaries, compared to 50% in Mexico and 60% in Brazil. As Porter (1990) noted, 'the Korean government encouraged the formation and upgrading of indigenous companies.' Korean firms were also willing to invest in in-house technology. The experience of Korea may confirm the argument by Porter (1990) that 'foreign multinationals should be only one component of a developing nation's economic strategy.'

5. Target shifting and constant upgrading

Export growth in Korea slowed down from 1977 and its absolute volume declined in 1979. Economic growth suddenly slackened, resulting in a negative 4.8% growth rate in 1980. Inflation was already high and capacity utilization in the heavy industries was low. In April of 1979, the Korean government announced the Comprehensive Stabilization Program (CSP). The major contents of the CSP included: 1) scaling back the role of policy targeting in the operation of preferential policy loans and interest rates; 2) increasing the trade liberalization ratio from 69% in 1986 to 95% in 1988; 3) stressing on the promotion of technology investment from 0.9% of GNP in 1980 to 2% in 1986 and 2.5% by 1990.¹⁰ The Technology Development Promotion Act, which was originally enacted in 1973, was strengthened in 1981 to provide new tax incentives for R&D investment.

Government continued to take an aggressive role in the restructuring of distressed industries, promotion of fair trade, and development of technology. It restructured the machinery industry by merging major heavy electrical equipment producers (Hyosung, Kolong, and Ssangyong) in 1980 and assigned them monopoly status. Hyundai International's Changwon complex (renamed KHIC in 1980 under KEPCO management) was nationalized and split into components under the management of Samsung, LG, and KEPCO in 1983. A shipping industry rationalization plan was initiated, resulting in a decrease in the number of companies from 60 to about 15 (World Bank 1987). A Fair Trade Law was adopted in 1981 to guard domestic fair trade practices against anticompetitive mergers as well as restrictive trade practices.

Korean policy-makers put heavy emphasis on R&D investment and technology upgrading.

R&D investment had increased substantially in the 1980s. The R&D investment ratio of Korea was still low compared to the OECD countries but was among the highest for developing countries (World Bank, 1987). Machinery, electrical products, plastics, transportation and other chemical areas were the industries targeted to rapidly increase their R&D expenditure ratio. In addition, the National Project for R&D was established in 1982 to support public as well as public-private joint R&D projects in the high-technology fields of electronics, fine chemistry, and engineering. Moreover, the public budget (roughly 40% of Korean R&D spending) had supported various scientific and engineering research centers for telecommunications, energy and resources, machinery, electronics, and chemicals. As a result, R&D expenditure expanded rapidly in the 1980s. For example, the number of research centers doubled between 1982 and 1984.

The composition of export subsidies also changed dramatically. The amount of export financing for facility upgrading increased substantially during the 1980s while financing for operational purposes decreased severely during the same period.

Many economists argue that there was a significant change in the government's philosophy concerning its role beginning in the early 1980s. They expected these changes to correct the accumulated ill effects of the industrial policies in effect during the HCI drive. It is true that the Korean government has been pursuing a broad program of deregulation and privatization since 1979. The most common reasons offered to explain this turnabout in policy have been: 1) Korean style industrial policy may be most effective at the early stage of development; 2) the Korean economy has grown so much in size and complexity that direct and close government control of the economy seems no longer to be efficient; and 3) the risk of policy failure due to lack of information is believed to have increased.

However, still unconvincing is the assertion by the free market advocates that the more market oriented policy regime of Korea during the 1980s brought in the better economic performance over the same period. Reality in Korea for the last three decades indicates the opposite case. Higher liberalization rates have been associated with lower average economic growth rates in Korea. It is not that rational to simply rely on the transcendental notion that invisible hands are enough to guarantee a better performance in any economy. Markets have never been enough for an economy regardless of its development stage and government has had a vital role to play especially in developing economies like Korea.

Free market advocates do not fully capture the essential features of the Korean development strategy, 'target shifting' and 'constant upgrading' of the industrial structure. Government intervention in Korea has always been intensive and extensive. It was the 'target' of the policies that differed strategically across the changing stages of economic development in Korea. The Korean government shifted gears to lay the groundwork for the generation of future comparative advantage. As the government fully recognized, output growth by 'pure accumulation of capital' without technical progress, has exposed severe limitations in the continuation of output growth.¹¹ The Korean government shifted gears again to initiate a new era, the 'innovation driven stage' as along the development path of Porter.

The Korean government launched its 'Five-Year Plan for the New Economy 1993–1997' under a government. According to this plan, three major goals of the new economy are: 1) enhancing growth potential; 2) strengthening internationalization; and 3) improving the living environment. With regard to the promotion of technology upgrading, the Korean

government, as argued by pure neoclassical economists to be an incentive neutral regime, specifies its aggressive and leading role as follows: 1) increasing investment in R&D to 3–4% of the GNP by 1998 and efficiently initiating government R&D projects; 2) upgrading strategic information industries that include subminiature personal computers, multimedia, and next generation switching systems; 3) making government funded research institutes highly specialized and task-oriented, and supporting private firms' efforts to initiate joint-research with such institutes, universities, and other private firms for more efficient technological development; and 4) constructing an information network for trading and distribution services and supporting the computerization of small- and medium-sized firms (KIEP, 1993).

6. Conclusion

Labor intensives in the take-off stage, capital intensives in the HCI drive stage, and technology intensive products in the liberalization stage are the shifted targets of the industrial policy in Korea. Industrial structure needed 'constant upgrading' to survive and succeed in the competitive international market.

The Korean economy has been far from being a market-oriented regime. Korea's economic development strategy is not the *laissez-faire* type of free market. The market mechanism in Korea has not worked efficiently enough to negate all the affirmative roles of government. 'The Korean government fostered growth by 'governing markets' and 'getting prices wrong' and by systematically distorting incentives in order to accelerate catching up - that is, to facilitate the establishment and growth of industrial sectors that would not have thrived under the workings of comparative advantage (World Bank, 1993).' It should be noted that one cannot see a complete picture of Korea's economic success without a serious consideration of its superior policy framework.

Government intervention in Korea has always been widespread and pervasive. Korean policy has changed in direction but not in degree. Even in the late 1990s, the fortunes of thousands of companies and millions of Koreans depend upon how government deals with current economic crises. Market liberalization, restructuring, and reform, all of the immediate agenda are essentially subject to government influence. Abandoning its leadership role for the economy after more than four decades of its direct control requires a longer period of time and calls for another decisive and pivotal role by government. The first, the second, and the third phases in Korea did not differ in terms of the extent of government intervention. It was content of policies that differed significantly across the different stages of development. Without understanding the nature of well sequenced industrial policies, and without explaining the nature of well managed government trade strategies in the early stages, an answer to the question of how and why Korea succeeded in its economic development will always be incomplete.¹²

Notes

1. An extended research on the role of Korean government in the 1990s from an interventionist perspective goes beyond the scope of this article. This paper focuses

on the role of government in the early stages of development. Different stages of development obviously call for different roles of government. The future of the Korean economy depends upon how government rises to the challenge to adjust and reform. A lot of work needs to be done by government to get beyond the current economic crisis. Various cyclical and structural factors, such as heavily indebted Chaebol (conglomerates), labor- and capital-market rigidities, high concentration on a few industries, inefficient financial systems, inadequate infrastructure, and corruption have been blamed by economists for the causes of recent troubles in Korea.

2. Interpreting East Asia's success, World Bank (1993) added one more perspective, a so-called market friendly view. The market-friendly view is an extended version of the neoclassical view admitting the fact that East Asia's experiences do not fully conform to the neoclassical model. According to this view, governments should perform four functions of growth: ensure adequate investments in people, provide a competitive climate for private enterprise, keep the economy open to international trade, and maintain a stable macroeconomy. Beyond these roles, governments are likely to do more harm than good (World Bank, 1993). For a comparative study based on this view, see Lim (1994).
2. Export incentives in Korea, as suggested by Smith (1991), included: 1) periodic devaluation; 2) preferential access to imports needed for producing exports; 3) tariff exemptions; 4) tax breaks; 5) domestic indirect tax; 6) lower direct tax; 7) accelerated depreciation; 8) import entitlement; 9) monopoly rights; 10) subsidized interest rates; 11) preferential credit; 12) reduced public utility taxes and rail rates; 13) a system of export credit insurance and guarantees; 14) free trade zones, industrial parks, and export-oriented infrastructure; 15) public enterprises; 16) export sales promotion; 17) general orchestration of sector-wide efforts to upgrade the average technological level; 18) government coordination of foreign technology licensing agreements; and 19) export targets. After analyzing industrial policies in key NIEs, Smith (1991) concluded that 'what to export' matters in successful development and 'manufacturing products' are the answer for that.}
3. The emphasis during the First Five-Year Plan was given to building up basic industries such as cement, chemical fertilizer, oil refining, and industrial chemicals. This policy focusing on basic industries was carried on into the Second Five-Year Plan. Iron and steel, machinery, electronics, automobiles, and petrochemical industries had priority in the Second Five-Year Plan. Though policy attention was paid to these industries, actual investment in these capital-intensive industries was made only after 1973.
5. For a comprehensive analysis of Korea's industrial policy, see Jones and Sakong (1980), Mason (1980), World Bank (1987, 1993), Hong (1988), Smith (1990), Wade (1990), Kwon (1990), Porter (1990), and Corbo and Suh (1992).
6. According to Faini (1988) and Choi and Kwack (1990), tax incentives played only a minor role in export promotion, while financial incentives took a major role in the export-led development process in Korea. Export credit constituted about 11.3% of the total loans in Korea in 1985 (Cho, 1990).
7. However, basing the performance of HCI policy on 'output growth rate' is not

complete in the sense that it is a one-sided analysis focusing on the benefit aspects of a certain project. Without the consideration of input-side (cost) in production, it is hardly possible to derive any meaningful evaluation of the HCI program. It is still widely accepted in Korea that the HCI drive was overambitious and resulted in serious misallocation of resources (World Bank, 1987). The overcapacity problem in the manufacturing sector was mainly caused by this bold HCI investment during 1973–1979. Yoo (1990) estimated the capital efficiency in Korean manufacturing and showed its decreasing trend in the 1970s and the early 1980s. Capital efficiency bounced back after the late 1980s. A detailed cost-benefit analysis of the HCI program both in the short-run and the long run will contribute to the controversial debate on the performance of the HCI drive policy in Korea during 1973–1979.

8. Smith (1991) asserts that ‘both mobilization and allocation of capital via domestic financial markets was at the center of Korean economic policy’. He also notes that the Korean government kept wages relatively low by the introduction of a social security system that reduced the bargaining power of workers. The World Bank (1993) reports that in Korea and Taiwan, real wages increased at roughly the same pace as real GDP. For a detailed explanation on the suppression of labor unions in East Asia, see Fields (1992) and Freeman (1992).
9. Openness to DFI has speeded technology acquisition in Hong Kong, Malaysia, Singapore, and, more recently, Indonesia and Thailand. Japan, Korea and, to a lesser extent, Taiwan restricted DFI but offset this disadvantage by aggressively acquiring foreign knowledge through licenses and other means. India and Argentina have adopted policies that hindered the acquisition of foreign knowledge (World Bank, 1993). The share of foreign firms in value added of the manufacturing sector in Korea was 10.7% and the share in export was 24.4% in 1985 (Hyun, 1993). Korean policy-makers preferred foreign loans to foreign direct investment. Export oriented and/or technology intensive industries have absorbed a large share of DFI in Korea while other industries, for example, infant industries, polluting industries, agriculture and fishery, consumer goods industries, industries with high imported raw material contents, have been subject to restrictions.
10. Other contents of the CSP included: 1) restrictive budget management with expenditure cuts and deferral of public investment projects; 2) privatization of the commercial banks; 3) plans to adjust investments in the heavy and chemical industries; and 4) increases of the share of bank lending to small/medium businesses.
11. If we fully accept the findings in World Bank (1991), 57% of output growth in East Asia was contributed by capital growth, 16% by labor growth, and 28% by technical progress during 1960 - 1987. For developed countries, however, most of output growth(averaged about 70%) was attributable to technical progress during 1960 - 1980.
12. For modest attempts to provide empirical evidences regarding the ongoing debate on the real sources of Korea’s successful economic development, see Thomas and Wang (1996), Heo (1996, 1997), Lee (1996), Barro and Lee (1994), Park and Kwon (1995), Lim (1994), Chen and Tang (1990), Dollar and Sokoloff (1990), Baumann and Braga (1988), Nishimizu and Robinson (1984), and Balassa et al. (1986).

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