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THE KOREAN MIRACLE (1962-1980) REVISITED: MYTHS AND REALITIES IN STRATEGY AND DEVELOPMENT

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ABSTRACT

Among all the newly industrializing countries, South Korea's development strategies, as implemented during the period of export-driven industrialization (1962-80), stand out as a model case in which rapid industrialization has been achieved by means of articulate trade and industrial policies. This paper, taking the historical perspective, critically examines the country's industrial policies and their consequences in development. The analysis focuses on the framework of strategies, the methods and policy instruments, and the implementation aspects of policies formulated. The discussions relate to sector-targeted policy measures as well as macroeconomic policies in the fields of foreign trade, foreign investment, financing and credit, public and private sectors, and technological development. The paper concludes with an overall evaluation of the efficacy and limitations of Korea's industrialization strategies; in particular it addresses the issue of replicability to other countries by placing their lessons in a proper historical, sociocultural perspective.

RESUMEN

Las estrategias de desarrollo de Corea del Sur, llevadas a cabo durante el período de industrialización orientada hacia la exportación (1962-80), sobresalen, entre los países de industrialización reciente, como un caso modelo en el cual se alcanzó una rápida industrialización mediante una combinación consistente de políticas industriales y de comercio exterior. Este trabajo adopta una perspectiva histórica para analizar críticamente las políticas industriales de dicho país y las consecuencias que tuvieron en su proceso de desarrollo. El trabajo está enfocado a examinar el marco de las estrategias, los métodos y los instrumentos de política, y aspectos relacionados con la implementación de las políticas formuladas. La discusión gira en torno a las medidas de política sectoriales y de política macroeconómica en los ámbitos del comercio exterior, la inversión extranjera, el crédito y el financiamiento, los sectores público y privado, y el desarrollo tecnológico. El trabajo concluye con una evaluación general sobre la eficacia y las limitaciones de las estrategias de industrialización de Corea; y dirige su atención en particular al tema de su aplicabilidad en otros países, situando sus enseñanzas en una perspectiva histórica y sociocultural adecuada.

1. Introduction

South Korea's "rags-to-riches"development is often cited as a "man-made" miracle. It is a miracle in the sense that in the span of the past three decades the country could achieve the kind of structural transformation (from a subsistence, agrarian economy to a modern industrial power) that today's industrialized countries took almost a century to achieve.[1] The transformation was, moreover, achieved with a degree of relatively equitable income distribution by international standards.[2]

South Korea up to well into the 1960s truly represented a backward, desolate economy based on subsistence agriculture with all the difficulties facing a typical developing country today. The area is about the size of the state of Indiana, and unlike the northern part of the peninsula, South Korea (referred to hereafter as Korea) is poor in natural resources. Only about 30% of the land area is cultivable and the arable land per farm household ranks among the lowest in the world (currently less than a hectare). Korean society was traditional, feudalistic, agrarian, and isolated from the West until the late nineteenth century. Japanese colonial rule during the period 1910 to 1945 brought both exploitation and modernization, influencing the country's future course of development. The small infrastructural base built during Japanese rule was mostly destroyed during the Korean War of 1950-53. The country's per capita income in the early 1960s[3] was lower than those of Haiti, Ethiopia, and Yemen and about 40% below India's. With such a low-level income, domestic savings were negligible. The population growth of nearly 3% a year in an already densely populated country meant that the country had to depend on foreign aid for sheer survival. Unemployment, underemployment and poverty were widespread with over 40% of the nation's population suffering from absolute poverty. If ever there was an economic basket case, Korea of the 1950s was it. Capitalism during the 1950s had done little for South Korea.

The country today, with some 42 million population and per capita income of nearly $5000 in 1990, is the world's twelfth largest trading nation, and is on the threshold of joining the ranks of industrialized, developed nations. The government-led, outward-oriented economic strategy worked satisfactorily until recently, resulting not only in rapid growth but also in gradual eradication

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[1] From 1954 to 1986, the mining and manufacturing sector increased its share of GDP from 12.0% to 30.2% with the share of agriculture in GDP decreasing from 44.6% to 13.5%. There was also a rapid change in the structure of foreign trade. In 1962, primary products accounted for almost three quarters of total exports with industrial products accounting for a quarter. By 1982 manufactures reached 94% of the total exports. Heavy machinery and chemical products began to comprise an increasingly larger share in composition of exports, reaching close to a half of the total exports.

[2] See Adelman (1974), Mizoguchi, et al. (1976), and Choo (1987).

[3] Per capita income was recorded at $87 in 1962.

of absolute poverty[4]: the nation's unemployment rate is currently around 3% and the incidence of absolute poverty is below 5% of the nation's population.

From the historical perspective of policy evolution, the post-Korean War era can be distinguished into three phases: import substitution (1954-1960); outward orientation (1961-1979); and balance and stabilization (post-1980). Distinct sets of policy goals and instruments can be identified for each phase. First, import substitution policies in the wake of the Korean War (1950-53) resulted in a lackluster growth performance.[5] This period, however, was devoted to the building of physical and human capital infrastructures that served as the basis for subsequent industrial development.

The second phase of export-based industrialization started with Park's military regime in 1961. For the ensuing twenty years, the state-guided strategy of industrialization through the development of a powerful export machine worked well. That Korea's development strategy in the second phase placed emphasis on export expansion can be seen from Table1-1, which disaggregates the contributions of different sources of demand to the country's economic growth. Frank, Kim, and Westphal, in a study (1975) based on Chenery-Shishido-Watanabe's input-output disaggregation method, find that throughout the 1950s import substitution contributed about twice as much as export expansion to GDP growth. During the 1963-73 period, export expansion, in relation to import substitution, made a more than threefold contribution. However, as Kim and Roemer (1979) point out, prior import substitution had created possibilities of improved utilization of capital for export expansion in subsequent periods. Thus, a sizable portion of the contribution of the export promotion policies of the 1960s to GDP can be attributed to prior import substitution. Nevertheless, attention must be drawn to the fact that markets for import-substitutable products were already saturated in Korea by the end of the decade. The shift toward export expansion in the early '60s was indeed both a timely and logical move in terms of the evolution of Korea's development strategy.

Toward the end of the 1970s, however, the Korean economy had overextended itself, and structural imbalances and bottlenecks brought about by the rapid growth policy of the past two decades were beginning to manifest themselves. The high rate of growth led to a rapid

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[4] Since 1962 the real income of the poorest groups has risen at about the same rate as GNP with actual declines registered in their relative share in the total population: the proportion of the population considered poor fell from 40.9% in 1965 to 9.8% in 1981 and to 5.1% by 1987. The land reform in 1949 actually provided a foundation for equitable development in Korea. For instance, between 1947 to 1964 tenant farmers fell from 42% of the total farm households to a mere 5%, while tiller-owners increased from 16.5 to 72%. However, although the incidence of absolute poverty has diminished, there is some evidence to indicate that inequalities in the relative sense have failed to improve in recent years.

[5] The average, real annual growth rate of the economy was 3.4% during the period between 1953 and 1960.

TABLE 1-1

Sources of Economic Growth

	1956-1960	1963-1973
Import Substitution	34.4	10.6
Export Expansion	18.0	35.8
Domestic Demand and Technical Change	47.6	53.6
TOTAL	100.0	100.0

Source: Frank et al. (1975).

buildup of foreign debt and stimulated inflation, with widening disparities within industry as well as between rural and urban sectors. Then came the assassination of President Park in 1979 and the resulting power struggle, followed by the oil-induced worldwide recession in 1980-1981 and the crop failure. As inflation became rampant in a stagnant economy, the government had to impose a stabilization program, at the same time strengthening programs for structural adjustment aimed at the restoration of a balanced, stabilized growth path because of the deepening structural distortions and imbalances in the economy. Thus, coming to the 1980s, the government started removing subsidies and preferential policy loans, gradually shifting policy concerns to the problem of making rapid growth more harmonious and less wasteful. The new path in development strategy during the decade of the 1980s called for an efficient allocation of investment to allow industries to develop more in line with the shifting comparative advantages in the world market, while at the same time emphasizing the need for welfare-oriented social development.[6] As the economy grows in size and complexity, the government's role in picking the winners must change to that of a referee in a competitive market.

This essay provides an overview of Korea's policies and practice and their consequences in industrial development during the 1962-80 period. This was the period of neo-mercantilistic state intervention within a market-oriented framework. The role of the state was to mobilize and allocate

[6] In 1982 the world-wide recession adversely affected the Korean economy; real GNP grew only by 5.6%. It quickly recovered to a 9.5% growth in 1983. In particular, the manufacturing sector grew 11%. This growth was attributed to brisk exports reflecting economic recovery abroad as well as the upsurge of a strong domestic demand.

the nation's resources to enhance national wealth and industrial strength, and to direct private sector activity to this end. The goal of the state was not directed toward regulatory welfarism as in the advanced capitalist countries. Nor was it meant to achieve egalitarian redistribution, as in classic Marxism. The closest historical parallels, although far from being exact, might be the developmental state of Bismarck's Germany or Meiji's Japan in the late nineteenth century. The focus of this essay on the development during the 1962-80 period is intentional. As a successful case of the newly industrializing economies, Korea's experiences during this period of development can be of use in those developing countries aspiring to industrialize.

The organization of this essay is as follows: The next section highlights the evolution of development strategy in terms of goals and policy instruments. Section 3 examines government policy as applied to specific areas in Korea's industrial development. Section 4 discusses the methods and efficacy of policy implementation. The last section concludes with an evaluative summary of Korea's industrial policy along with the lessons to be learnt for other industrializing countries.

2. Growth and Structural Change

In the period of 1962-1979, Korea's real GNP and exports grew at the average annual rates of 9.3 and 33.7%, respectively. As shown in Table 2-2, the growth performance was more spectacular in terms of real per capita which showed an 18-fold increase to $1,481 in 1980 from $87 in 1962. Rapid economic growth brought with it a drastic transformation in Korea's industrial structure; primary activities which accounted for as much as 40% of total economic activities in 1962-64 declined to 18.3% by 1980 while manufacturing and mining rose from 18.1% to 30% (Table 2-1).

Within manufacturing, such light industries as textiles, garments, and plywood, which had expanded rapidly thanks to the export boom throughout the 1960s, gradually gave way to heavy industries beginning in the middle of the 1970s. The sectors whose importance the government never tired of stressing were basic materials such as iron and steel, petrochemicals, nonferrous metals, and refined oil. The government saw these sectors as the backbone of a modern industrial economy, and continued to undertake risks that cautious entrepreneurs would tend to avoid by providing heavy capital investment in these industries. Starting at the modest level of one million tons a year from Pohang Steel Mill,[7] the government undertook the expansion of

[7] This was built with financing from the Japanese loans included in the Korea-Japan Peace Treaty reparation settlement, and with the help of a consortium of Western steelmakers.

TABLE 2-1

Sectoral Origins of GNP

	Agriculture, Forestry, Fishery	Manufacture, Mining	Utilities, Construction	Services
1954-56	44.6	12.0	3.2	40.2
1957-61	39.1	15.0	4.2	41.5
1962-66	40.0	18.1	4.4	37.5
1967-71	28.0	21.8	6.3	43.9
1972-76	24.5	26.7	5.8	43.0
1977-81	18.3	30.0	9.2	42.6
1982-86	13.5	30.2	10.9	45.4

Source: Economic Planning Board, *Major Statistics of the Korean Economy*.

production in successive phases. Pohang Steel Mill is now ranked the twelfth largest steelmaker in the world with an annual capacity of 8.5 million tons. Other steel mill complexes were added; by 1981 the total steel capacity in Korea covered about 90% of domestic markets and some steel products began to be exported.[8] The share of the heavy and chemical industries rose from a quarter of the total manufacturing production in 1962 to more than a half by 1980. Korea was well on its way to becoming a full-fledged industrialized nation.[9]

After establishing large steel mills, in successive plans the government targeted other sectors that could importantly serve as steel consuming sectors. For instance, the shipbuilding industry, which started with small ships for fishing and cargo transport, took advantage of highly

[8] The Korean steel industry uses highly automated production methods and benefits from scale economies. Production is exceptionally efficient, running on near capacity.

[9] In particular, primary metal, steel, and in particular, construction developed rapidly. Spurred by vigorous war-related demands during the Vietnam War and later by large-scale investment demands in the Middle East, the construction industry registered high growth and contributed to the rapid economic growth of the 1970s.

skilled labor and positive government support and expanded the product range to include such sophisticated vessels as oil tankers, product carriers, steamers, and drilling ships. By the early 1980s, the industry's outstanding orders for export amounted to 1.35 million gross tons, second only to Japan's.[10]

In addition to shipbuilding and other construction industries, the government initiative turned to the automotive industry. Starting from a rudimentary assembly plant in 1962 that produced about 3,000 cars and trucks annually, the early 1970s it began to adopt special measures to develop this industry. These measures consisted of strong financial support and high tariffs on imported vehicles but none on knocked-down parts that could be repaired by myriads of domestic artisans. Another aspect of industrial development that deserves mention concerns the capital good's sector. As a result of intensified government support to vertically "deepen" Korea's industrial structure in the early 1970s, the capital goods,[11] machine tools, and other heavy equipment[12] sectors grew very rapidly.[13] The machinery and equipment industry achieved a rate of growth about 2.5 times that of the manufacturing sectors as a whole during the 1970s. Toward the end of the 1970s, about a third of total capital goods sector output was already being exported. Along with the development of the skill-intensive capital goods sector, the electronics industry also developed rapidly, starting from the assembly-line production of parts and components and progressing to the production of such complete consumer products as color televisions, microwave ovens, video tape recorders, stereo sets, and digital watches.

In spite of the rapid growth of the first two decades, the benefits of growth appears to have been shared more equitably than in other developing countries. Table 2-3 shows the size distribution of income for selected years for which data were made available. The Korean data for income distribution for the 1960s and 1970s are limited in sample size and exclude the extreme

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10 The Korean shipbuilding industry still faces several difficulties: low-grade technology, high dependency on imported machinery and low capacity use in recent years. However, it is expected to maintain a competitive edge over the industries of developed countries, which suffer from outdated equipment and high wage costs. Thus, Korea's market share is expected to rise as world demand picks up and Korean shipbuilding is likely to experience steady growth in the future.

11 "Capital goods" in general include the machinery and other equipment that enter into capital formation.

12 The share of machine equipment in total value added of capitals goods (which included transport equipment) in 1979 was about 5% (Yearbook of UNESCO).

13 Electrical equipment (in particular transistors) and transport equipment (ships and boats) have been the largest Korean export item in the category of capital goods, exported mainly to developed market economies. Most vigorous progress in the past several years has been made in the electronics area with the Korean electronics firms riding on strong demands both at home and abroad. The electronics appliances and parts to be produced by 1,000 companies in Korea in 1984 were valued at 7 billion dollars. Their exports accounted for more than 60% of total production.

lower and upper income classes. This makes the determination of the precise patterns of distribution difficult. Nevertheless, the available studies tend to indicate a slight deterioration in income distribution: except during the mid-1970s when the overall distribution slightly improved, the income share of the lowest 40% continued to decrease from 19.3% in 1965 to 15.5% in 1978. On the other hand, the share of the top 20% rose from 41.8% to 45.3% over the same period with the overall Gini coefficient changing from 0.28 to .0.38. Korean performance, however, has been considered to be far better than other developing nations, in particular as compared to most of Latin American countries.

TABLE 2-3

Trends in Income Distribution

	% of Income Received		Gini Coefficient
	by upper 20%	by lower 20%	
1965	41.8	5.8	0.344
1970	41.6	7.3	0.332
1975	45.3	5.7	0.392
1980	45.4	5.1	0.389
1985	43.7	6.1	0.363

Source: Economic Planning Board.

The deterioration in the distribution was accompanied by the shift of economic activities from agriculture and other unincorporated businesses to manufacturing. As shown in Table 2-4, while unincorporated business incomes fell from 32.7% in 1965 to 14.6% in 1980, the incomes in the formal sectors, which consist of wages, salaries, and property income rose from 42.4% to 57.2% over the same period. In Korea, incomes were more evenly distributed among rural households than among urban households. For instance, the Gini ratio for manufacturing in Korea stood at .41 for both years of 1965 and 1976, which was far above the .28 to .32 range for agriculture and small industries. The lower ratio for agriculture was a result of the successful land reform in the late 1940s, by which the land was fairly evenly distributed to the farmers and

absentee land owners and large-scale land holders were virtually eliminated. In contrast, the distribution within industry remained more uneven; as will be discussed later, the government deliberately promoted and subsidized large-scale industrial firms during the export period, while discriminating against small establishments.

TABLE 2-4

Sources of National Income

(unit: %)

	Unincorporated Business		Wages and Salaries	Property Income[1]	Others[2]	Total
	Agriculture	Nonagriculture				
1965	32.7	19.2	31.8	10.6	5.7	100.0
1970	24.3	16.5	39.5	13.9	5.8	100.0
1975	23.5	17.3	38.4	12.7	8.0	100.0
1980	14.6	12.3	49.4	17.5	6.2	100.0

[1] Profits, dividends, rents, corporate net savings, and transfers.
[2] Government enterprise profits and statistical errors.
Source: Bank of Korea, *Economic Statistics Yearbook*, 1982.

As mentioned already, what should be noted is the speed of development, which is far more remarkable than the post-World War II recoveries of Western Europe and Japan. The Korean experience holds out hope for other developing countries that economic development, once touched off, could be a quick process requiring no more than a couple of decades.

3. General Synthesis: Policy Aims and Frameworks

A. The Strategical Framework for Industrialization

The Korean experience in trade and development contradicts in many ways the traditional argument for free trade. The conventional argument, based on the principle of comparative

advantage, emphasizes the benefits from free trade by engaging in those activities for which the country is best suited in terms of resource endowment: in particular, differences in factor endowments should determine the patterns of comparative advantage; a labor-abundant country will have a comparative advantage in labor-intensive goods relative to a capital-rich country.

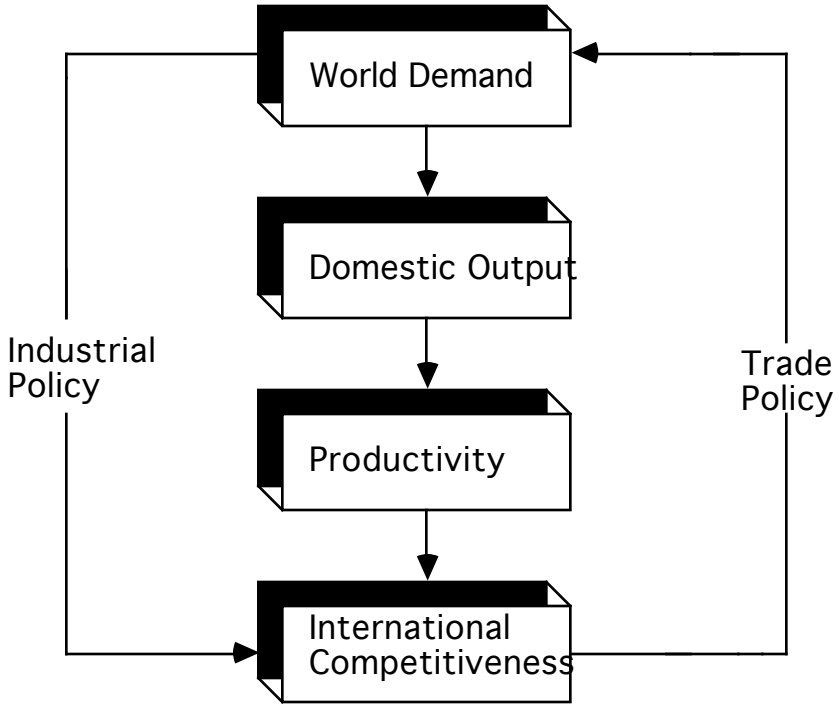
When Park Jung-hee was installed in power in 1961, his policymakers, learning from neighboring Japan's experience, saw the need to build a solid industrial base as the cornerstone of Korea's future development. The long-run strategy favored diversification into manufactured exports. To pursue the policy objective for industrialization, it was felt necessary that the state, given the initial weakness of the private sector, had to play a leading role in formulating and implementing trade and industrial policies. The basic strategy to develop industry called for targeting a few sectors of the economy that were expected to perform well in international markets. Those firms entering them would be granted special incentives, which will be discussed in more detail later.

In Figure 3-1 the philosophy underlying Korea's earlier development strategy is illustrated using Eatwell type of "cumulative causation" framework (1982, 48-67). The diagram shows the link between world demand and domestic output for a small, open economy. The world demand in the upper box determines the level of national output. The unit cost of industrial output is affected by the level of output, given the presence of scale economies in manufacture; namely, the greater the level of output, the lower the unit cost of production. Thus, the initial level of exports determines the country's international competitiveness, which in turn influences the rate of growth in world demand. A virtuous circle becomes complete; the more the country sells abroad, the easier to sell. The opposite, vicious circle is also possible. If the country loses the initial share of the world market, the domestic output level shrinks, riding upward on the cost curve. The rise in the unit cost could adversely affect the country's export competitiveness, resulting in further losses in the market share.

State interventions could prove instrumental in maintaining the virtuous circle in motion. If, for example, exports run into difficulties, the government could introduce policy measures to stimulate export demands. Such policies include exchange rate devaluation, export subsidies, or other export incentive systems. If the export sector begins to lose competitive edge in international markets, the government may resort to fiscal or monetary policies to grant special incentives to or even to direct controls over specific sectors or firms. Imports would be confined to sectors complementary to export-sector development. Protective trade policies would be necessary to protect the country's balance of payments position.

FIGURE 3-1

Korea's Neomercantalist Model



The above model fits fairly close to Korea's development strategy in the decades of the 1960s and the 1970s. It runs counter to the received view of market-oriented development, according to which Korea's industrialization is seen as a case of success on account of changing comparative advantage attained by "correct" pricing and "realistic" exchange rate policies.[14] While not denying the important roles played by market-oriented policies, the point to note is that the market system is used, when deemed appropriate and necessary, only as an instrument in achieving national developmental goals. As such, it can explain part of Korea's success.

Not surprisingly, there were problems of bureaucratization buttressed to implement policies, which often stifled initiatives and blatantly distorted efficiency in resource use. In the earlier years of Korean development, however, it was simpler to get the bureaucracy moving rather than trying to bring into line the weak private sector. There was not much of the private sector to begin with.

[14] See for instance, Balassa (1985), Bhagwati (1985), and Krueger (1980). For opposing views, see Amsden (1989), Jones and Sakong (1980), and Sen (1983).

B. The Framework of Strategy Implementation

Broad goals in a development strategy remain political window-dressing unless they are actually carried over into specific policies. Specific policies for industrial development in Korea during the period of export expansion can be grouped into two broad categories: the first was the set of macroeconomic policies aimed at influencing the general environment for industrial activities, and the second, the set of policies more directly targeted on the development of specific sectors or industries.

The Setting of the Macroeconomic Environment

One important objective of Korea's earlier industrial policy was to create an economic environment conducive to efficient resource utilization. There were two aspects of economic policy implemented for this purpose.

One aspect of this was government investment in infrastructural development. During the 1960s the lion's share of public funds went to funds in infrastructural projects (highways, port facilities, electricity, irrigation, transportation, communication, etc.). The government and public enterprises accounted for close to 40% of the total domestic investment in the period between 1963 and 1979 (Table 3-1). Moreover, the industrial composition of government investment reveals that the share of infrastructure projects investment has been steadily rising, reaching as high as 76% of the total public-sector investment in the years between 1977-1980 (Table 3-2). It was these infrastructure and intermediate production support activities that constituted the foundation for strengthening the vertical linkage of production, paving the way for the process of rapid economic growth.[15]

A good deal of infrastructural building was undertaken by existing or newly established public enterprises. Government-owned enterprises grew rapidly, increasing from 7% of GDP to 9% during the 1963-1972 period. They were essentially created to serve as industrial infrastructure and to supply inputs to downstream industries. In addition to creating "forward linkage" effects, they made a substantial contribution to capital formation and technological development. A good example of the success of public enterprises is the Pohang Steel Mill (POSCO), which was constructed in 1973 under Japanese aid. POSCO quickly emerged as a global producer. It has been technologically modern and extremely cost-effective. Its main objective has been to provide low-cost, high-quality products to downstream industries. The cost effectiveness of this public sector has been a factor contributing to the subsequent development of other downstream industries, such as shipbuilding, construction, automobiles, and machinery.

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[15] The active government investment support, however, gave rise to budgetary deficits and exerted inflationary pressures on the economy in the early '70s.

Perhaps more important was the second aspect of policy dealing with the price setting of such key resources as foreign exchange, investment funds (interest rate), transport, and staple grains. The Price Control Act revised in 1962 empowered the government to control the prices of most staple grains and the rates of public utilities. Given the important role of prices in the overall allocation of resources, extreme care has been exerted to reconcile the economic interests of various social classes. According to Whang, as late as 1966 some 40% of total economic transactions was subject to direct or indirect forms of price control.[16]

The first round of general price reform was attempted before the inauguration of the Second Five-Year development plan (1967-1972). The First Plan ('62-'66), largely a rehash of the ideas presented to the previous regime, was prepared in a hurry simply to show the government's seriousness about economic development and to provide a ground for more sophisticated, subsequent plans. The new measures included the exchange rate reform of 1964 and the interest rate reform of 1965. The exchange rate reform devalued the won from 130 to 255 per dollar and substantially liberalized exchange controls. The devaluation was based on a study comparing world and domestic prices, with the new rate reflecting the median purchasing power parity in international markets.

The interest rate reform of September 1965 doubled the six-month deposit rate to 24 per cent per annum (a real interest rate of around 11 per cent). Borrowing rates, except for special purposes, were comparably raised. The reform was meant to place a real rate of interest more in line with the prevailing real rate of return on capital, to enable a shift from quantitative credit rationing towards "market" allocation, and to encourage domestic savings.[17] It was also hoped that higher interest rates would reduce inflation.

Both reforms brought key resource prices into line with relative resource scarcities. Since prices must be used to measure the value of resources in uses alternative to those being investigated, adequate resource planning becomes difficult when prices are severely distorted. In this sense, the reforms of 1964 and 1965 were a precondition for meaningful resource planning. But their significance was far greater. For much of planning's positive impact on economic performance came from the reforms. The basic driving force for development in Korea was private sector response to price and nonprice incentives. Sustained development in a largely market-oriented economy would be difficult without an adequate price system (taking into account the effects of subsidies, taxes and quantitative controls) that reflected relative resource scarcities.

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16 Whang (1987, p. 83).

17 Real domestic savings doubled in 1965 and again doubled by 1967. The velocity of money was reduced, halving the rate of inflation over what it would have been without the cut in velocity induced by the change in the interest rate; the incremental capital output ratio declined by 30 per cent; and the investment rate rose as fast as the increase in savings permitted.

TABLE 3-1

Public Sector Investment

(unit: billion won in 1970 prices)

	Private and Public Investment (A)	Public Investment			Composition (%)	
		Government (B)	State Firms (C)	State Controlled Firms (D)	(B+C)/A	(B+C+D) /A
1963	91.1	9.7	7.9	19.7	19.3	40.9
1964	100.6	8.2	15.9	18.9	24.0	42.9
1965	120.9	14.3	16.9	21.5	25.8	43.6
1966	223.9	24.9	24.4	23.8	22.0	32.6
(Average)					(22.8)	(40.0)
1967	280.7	35.4	26.9	57.5	22.2	42.7
1968	427.7	71.4	34.9	43.6	24.9	35.1
1969	621.3	129.3	39.0	75.4	27.1	39.2
1970	719.1	134.7	36.5	74.7	23.8	34.2
1971	831.4	149.6	44.4	138.5	23.3	40.0
(Average)					(24.3)	(38.2)
1972	873.8	156.1	63.6	214.5	25.1	49.7
1973	1,341.0	166.7	103.0	131.9	20.1	29.8
1974	2,274.3	214.5	211.1	304.6	12.8	26.2
1975	2,881.8	320.4	228.1	584.3	21.9	42.2
1976	3,378.2	429.0		580.6	19.5	36.7
(Average)					(19.9)	(36.9)
1977	4,645.0	611.9	432.4	888.0	22.5	41.6
1978	7,137.7	852.3	209.0	1,207.6	17.7	34.6
1979	10,293.5	1,348.1	475.8	1,556.2	17.7	32.8
(Average)					(19.3)	(35.3)
Total					(21.8)	(37.9)

Source: The Bank of Korea, Seoul.

TABLE 3-2

The Industrial Composition of Public Sector Investment

	Primary Industry	Mining and Manufacturing	Infrastructural and Social Overhead	Total
First 5-Year Plan (1962-1966)	25.7	20.8	53.5	100
Second 5-Year Plan (1967-1971)	25.9	13.3	60.8	100
Third 5-Year Plan (1972-1976)	22.7	15.6	61.7	100
Fourth 5-Year Plan (1977-1980 average)	15.7	8.5	75.8	100
Total Average	22.9	14.9	62.2	100

Source: *Economic Planning Board.*

Sector Policy

The basic strategies for attaining the nation's broad economic goals involved decisions over time on the shift in policy support from sector to sector. From a longer term perspective on the growth process itself, however, a strategy gradually evolved for upgrading the economy by shifting from dependence on relatively labor-intensive light industry to a structure based on heavy and chemical industries. This made perfectly good sense. Korea's original comparative advantage was cheap and diligent labor. It was therefore reasonable for Korea to engage in sectors like textiles, garments, footwear, and simple electronics. As the domestic wage rate rose and more capital was accumulated, it appeared more advantageous by the mid-1970s from the viewpoint of international comparative advantage for Korea to move into more capital-intensive sectors such as steel or petrochemicals. Other developing countries, particularly in Asia, were becoming strong rivals in the export market for traditional, labor-intensive goods. At the same

time, the industrialized countries were turning toward increased protection, particularly against traditional exports from the developing countries.

This progression reflects the dynamic strategy for industrialization that Korea has been pursuing along a path similar to the one that neighboring Japan was following. To make things easier, Japan was constantly churning out long-term projections and visions for futuristic industries. By the late 1960s, the government began selecting "strategic" industries which it was willing to back more energetically than others through a series of measures of a general supportive nature. Korea slipped into the practice later known as "targeting industry and product" that prevailed in the 1970s. This dynamic sequencing more or less reflects the changing pattern of comparative advantage for Korea, as her factor endowment conditions also evolve.

First, the Electronics Promotion Law in 1969 recognized electronics as a "strategic export industry." Comprehensive plans for developing the industry attempted to direct the effort to adapt to the technological changes taking place in the industry worldwide. The government quickly established industrial estate with such suitable infrastructures as Kumi and Masan, and such specialized institutes as the Korea Institute of Electronics Technology, Korea Advanced Institute of Science and Technology, and the Electronics Industries Association of Korea for research, adaptation, and development.

In the wake of the plans for the electronics industry, the promotional policy quickly turned to heavy and chemical industries. In 1973, President Park officially initiated the campaign for the creation of a heavy and chemical industry. The strategic branches of the industry included iron and steel, chemicals and petrochemicals, electrical and general machinery. Various projects were included in the Third and Fourth Plans with generous funding of the manufacturers who qualified. The usual support and incentives were provided for those firms that could export, and imports were restricted for those that could supply the domestic market. It seemed that no effort was spared in order to attain the targets.

Following the development of heavy and chemical industries, the choice of "strategic" industries varied over time, ranging from sophisticated electronics to shipbuilding and to automobiles, among others. The support measures were steadily strengthened. Rather than channel funds and adopt projects as opportunities arose spontaneously, an effort was made to direct the economy along the desired path, as its development evolved.[18]

The task of developing specific strategic sectors, however, was essentially left in the hands of the private sector. The allocation of investment was an important part of policy but the

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[18] In passing, it must be noted that the practice of sector targeting, beginning in the Fifth Five Year Plan during the 1980s, has been gradually phased out as the economy becomes increasingly sophisticated and complicated to manage. Except for the high-tech sector which continues to receive government support, measures that can benefit all indiscriminately are now being implemented.

role of planning was confined to determining where incentives for investment should be given, and to indicating and establishing an appropriate set of incentives that could guide private entrepreneurs to the right decisions. As indicated in the Plan documents during the 1970s,[19] the primary goal of planning for industrial priorities was seen as providing incentives to the private sector at a level compatible with resource needs and availabilities. The role of the public sector was, after setting incentives, to respond, where desirable, to "private sector" requests for credit, subsidies, and foreign exchange allocation. An important task of planning at this point also consisted in developing capacity for project evaluation and decision-making at least at the ministerial level.

Once the government decided to promote certain strategic industries, all forms of incentives were made available to them. The incentive system geared to the development of a specific sector included such measures as subsidies given through tax exemptions, faster depreciation of necessary equipment, loans and deductions for the import of capital goods, facilities and savings for the import of intermediate goods, arrangements for licensing technologies, differential pricing or directly beneficial expenditure; quantitative restrictions on imports of goods and capital, on the allocation of investment funds through the banking system, on the use of transport facilities, and quantitative targets for exports and overhead investments. These measures were administered within centrally imposed constraints by several ministries, notably Agriculture, Commerce and Industry, and Finance, and by special offices, such as the National Tax Administration.[20]

To recapitulate, in Korea's planning an overall price reform preceded the sectoral development plan. This served as a precondition for rational resource planning at the sectoral and more disaggregated level. Trade reform measures focused on shifting the economy from a strategy of import substitution towards that of export promotion. The financial reform became the classic example of a successful policy of mobilizing resources, stabilizing prices, and promoting investment.

In selecting industrial activities classified as having priority, no particular consideration needed to be given to the shadow prices of the factors of production, nor to the resulting sectoral structural distortions. The prevailing exchange rate and interest rates were used in industrial

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19 The earlier Second Five-Year plan (1962-1966) was fairly comprehensive in scope and rigorous in contents as it relied on sophisticated input-output tables. This framework was an attempt to provide an intersectoral investment plan consistent with accelerated growth of the economy. Because of inadequate resources devoted to the planning, the framework quickly became inadequate for projections after two years of use. Subsequently, top policymakers in Korea did not find that comprehensive, centralized planning would be of much material assistance in executing policy decisions. Instead, they adopted a more decentralized "indicative" planning method.

20 For the details of incentive measures, see Hong, W. (1979) and World Bank paper (1981, No. 1469).

project evaluation without undue concern for excessive distortion that might result from the project. Macro policy measures for liberalization simply provided a setting in which industrial activities could be selected, not on an *ad hoc* basis but in relation to their relative contribution to the objectives of rational economic use of capital, as well as the generation or saving of foreign exchange.

4. Strategy Evolution in Policy Areas

Some of the material in this section has already been dealt with. The purpose of the present section, however, is to critically reevaluate the elements and the salient features of policy packages in specific policy areas.

A. Trade Policy

Obviously for a small, resource-poor economy like Korea, the choice of trade strategies is bound to affect the evolution of its industrial development and structure. Historically, South Korea started with modest industrialization efforts centered exclusively on import substitution. In the decade following the end of the Korean War in 1953 the economy had largely been preoccupied with its postwar reconstruction and limited efforts for industrialization, mainly in import-substitutable basic consumer goods. By the late 1950s, the initial domestic demand for substitutable goods had been satisfied, and the heavily protected local manufacturers became too inefficient to compete in the world market. Insufficient foreign exchange, which was needed to buy foreign technologies and capital equipment, began to stymie attempts to move up on the import substitution ladder. The country only managed to survive on the basis of a meager industrial structure that could not last long without imports of essential raw materials, and as the U.S. threatened to cut off the indispensable flow of aid. The Park Chung Hee regime's alternative choice in 1961 thus was to consciously create an industrial base for production of exports that could be sold abroad to finance Korea's vital imports that had to include massive shipments of grain as well as fertilizer.

Export Policy

The government quickly instituted a large arsenal of material incentives to encourage exports in the nation's all-out war for survival. When an exportable product was targeted for development, the government provided direct and indirect incentives in financing, taxation, and administrative control to the manufacturer who qualified. The incentive measures consisted, at various times, of reductions in corporate and private income taxes; tariff exemptions for and tax

rebates on materials imported for export production; financing of imports needed for producing exports; business tax exemptions; accelerated depreciation allowances; creation of various reserve funds; a fund at subsidized interest rates to promote export industries and another to encourage firms to export; foreign currency loans to finance exports on long-term credits; an export-import link system; differential treatment of traders based on export performance; export insurance; and so on.[21] The provision for accelerated depreciation allowed the manufacturing firms that earned more than 50% of the revenue in foreign exchange to write off from the tax an extra depreciation of up to 30% of the ordinary depreciation allowed by the tax law.

Among all incentive measures, interest subsidies to exporters turned out to be one of the most important. Table 4-1 compares the interest rates charged by the banks to export-oriented, and commercial-oriented businesses. Throughout the initial two decades of Korea's take-off, the export interest rates were considerably below the commercial rate, accounting for 40 to 60% of the latter. For instance, in 1965 when commercial interest rates reached 26%, export enterprises financed as much as 78% of their operating budgets from bank loans at 6.5%. Short-term credits to exporters continued to climb to as high as 94% of required capital by 1972. Export credits had always been excluded from credit controls—often stringent—during times of economic hardship.

Measures for moral incentives were adopted with almost an equal force.[22] The Ministry of Commerce and Industry also set annual export targets for officials connected with export administration. If targets were not fulfilled, the administrative process was expedited to strengthen existing export-support schemes, to innovate new subsidy measures, and to exert irresistible pressures on businessmen to accelerate exports, even though this might entail losses.

The export manufacturer could obtain subsidized loans from such institutions as the Korea Development Bank, the Export-Import Bank, the Technology Development Corporation, and the National Investment Fund. A series of legislation and regulations, such as the Tax Incentives Law, the Government Budget and Accounting Law and the Tariff Law, provided various forms of tax relief and tariff reductions for imported inputs to the manufacturer.

Other institutions promoting exports were also established. One is the Korea Trade Promotion Corporation (KOTRA), a nonprofit government agency established in 1962. KOTRA now has over eighty branches around the world and a home office that engages in research and promotion. Among other activities, it displays Korean products, participates in international trade fairs, dispatches trade missions to potential markets, and receives enquiries and visits from foreign

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[21] Real export incentives were maintained at a relatively constant level after 1964, while sporadic efforts were made to reduce import restrictions. A World Bank study (1977, No. 263), demonstrated that, despite market variations from industry to industry, the average tariff rates were quite low (averaging about 9 per cent in 1965) even by international standards.

[22] The public was constantly reminded of the importance of exports through ceremonies, monthly export promotion meetings, and the presentation of awards to those who achieved most. Exporting was to be considered as a patriotic duty.

businessmen seeking Korean products. It also sponsors the Korea Exhibition Center which hosts major trade fairs, including the Seoul International Trade Fair that attracts as many as 10,000 foreign buyers. In the private sector, the Korean Traders Association, which runs the World Trade Center in Seoul, provides backup to its over 2,300 member companies. Trading companies, known as "Chonghap Sangsa," were another important institution created by the government to specialize in export promotion. In the days of import substitution there were many small importing firms that took advantage of the overvalued exchange rate to profit from imports. With the emphasis on export promotion, there was a general need for trading agencies that could direct imports of raw materials while promoting manufactured goods exports.

Interestingly, rather than support large and small trading companies indiscriminately, the government decided to support very large ones that were generally affiliated with various industrial conglomerates as their trading arms. These large traders were not only relatively more efficient owing to their scale-economies but had access to a much broader range of foreign markets. Larger companies were enticed to enter the field by various incentives that included advantages in the areas of trade administrations, export financing, taxation, and foreign exchange control. The government in return demanded superb performance through the familiar tool of export target-setting. These export targets were broken down in considerable detail by domestic exporters, with enough disincentives to motivate them toward acceptable performance.

Moreover, the targets based on what the firms thought they could achieve were raised from year to year by the government according to their own projections of how fast export should grow. The creation of chonghapsangsa was another tool to make export-oriented strategy work well for Korea. In a short time, full-fledged trading firms emerged, quickly establishing a distribution network throughout the world. These institutions were instrumental in helping many manufacturing firms to get a foothold in foreign markets.

The official policy for creating an industrial base for export promotion, designed by Park's team of technocrats, proved immediately successful. Largely owing to the expanding international market in the 1960s, growth in exports attained an extraordinary rate that far exceeded everyone's expectations. From 1962 to 1982, the average rate of export growth was about 30% a year with peaks of over 50%. The nation's annual export value soared from an extremely modest US $55 million in 1962 to a massive US $27 billion in 1982. Whereas the ratio of exports to GNP was a pitiful 1% or so in the 1950s, it rose to 30% and more in the late 1970s (in current prices). Exports, considered as the country's "engine of growth," became something of a

TABLE 4-1

Comparison of Bank Interest Rates in Export vs. Commercial Loans

	Export lending (A)	Commercial lending (B)	A/B
April 1962	12.78	16.43	0.78
July 1962	10.95	16.43	0.67
December 1962	9.13	15.70	0.58
May 1963	8.03	15.70	0.51
March 1964	8.00	16.00	0.50
September 1965	6.50	26.00	0.25
June 1967	6.00	26.00	0.23
May 1973	7.00	15.50	0.45
January 1974	9.00	15.50	0.61
April 1975	7.00	15.59	0.45
August 1976	8.00	18.00	0.44
June 1978	9.00	19.00	0.47
January 1980	12.00	25.00	0.48

Source: The Bank of Korea: *Economic Statistics Yearbook.*

cliché in government and business circles with its overall contribution to real GNP growth estimated at about 45% for the 1962-1982 period and around 60% for the 1970s.[23]

A quantitative assessment of overall price incentives given to Korean exporters was attempted in a World Bank study.[24] Figure 2 traces movements of Korea's nominal and real effective exchange rates between 1962 and 1975. The real effective exchange rate is meant to reflect the actual amount in the Korean won received by exporters per dollar of their exports. The indicator is obtained by subtracting from the nominal rate all forms of indirect taxes and by adding tariff exemptions and other subsidies given to exporters.[25] The effective exchange rate for exports was 264 in 1962 and fluctuated between 299 and 308 in the 1964 to 1970 period. It increased 30% to about 400 by 1973,[26] and despite its fall in 1974 and 1975, still remained higher than its average over the latter half of the 1960s. Although these measures are only crude indicators, they suggest that the government's efforts for export push relied primarily on the incentive system. The government, in addition to periodic devaluations, continued to adjust export incentive rates between devaluations in order to maintain the incentive rate at a relatively stable level in the face of more rapid inflation domestically than abroad.

While government intervention and discrimination were being used as a means of export promotion, policymakers concerned with long-term developments were kept busy trying to see a little further into the future and provide guidance for directing industrial restructuring towards exports. Using the control of finance as an essential instrument in the restructuring of industry, the government continued to designate the plans for a futuristic industrial base.

For instance, by the late 1970s, a shortage of skilled labor combined with the Park regime's quiet decision to lift the lid on wage increases caused labor costs to rise much faster in Korea than in the major exporting nations of the region. From 1975 to 1980, for example, the annual rate of increase of unit labor cost was 17.5%, but only 7.1% in Taiwan and 0.8% in Hong Kong. Thus by 1979, textiles that alone had accounted for over 40% of labor-intensive exports in the 1970s, along with eight other manufactured articles like plywood, wigs, and electrical appliances that accounted for another 25%, together declined to 30% while more capital-

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23 This export success, however, should not make one forget that imports also kept growing at quite a considerable pace. From 1962 to 1980, imports attained an average growth of 20%. This was much slower than export growth. It was not easy for Korea to hold imports down since the bulk of them were fuel, raw materials, and intermediate goods that went into the production of its exports.

24 See Westphal and Kim 1977, pp.11-25.

25 A more meaningful indicator should incorporate other incentive and disincentive instruments, such as all forms of subsidies including interest subsidies, access to imported inputs or price reductions on overhead inputs.

26 This was largely caused by the appreciation of the Japanese yen that contributed to a two and a half fold increase in the real value of exports during this period.

intensive heavy industrial products including iron, steel and ships began to replace light industrial products.

TABLE 4-2

Effective Exchange Rates for Exports

(annual averages: won per U.S. $)

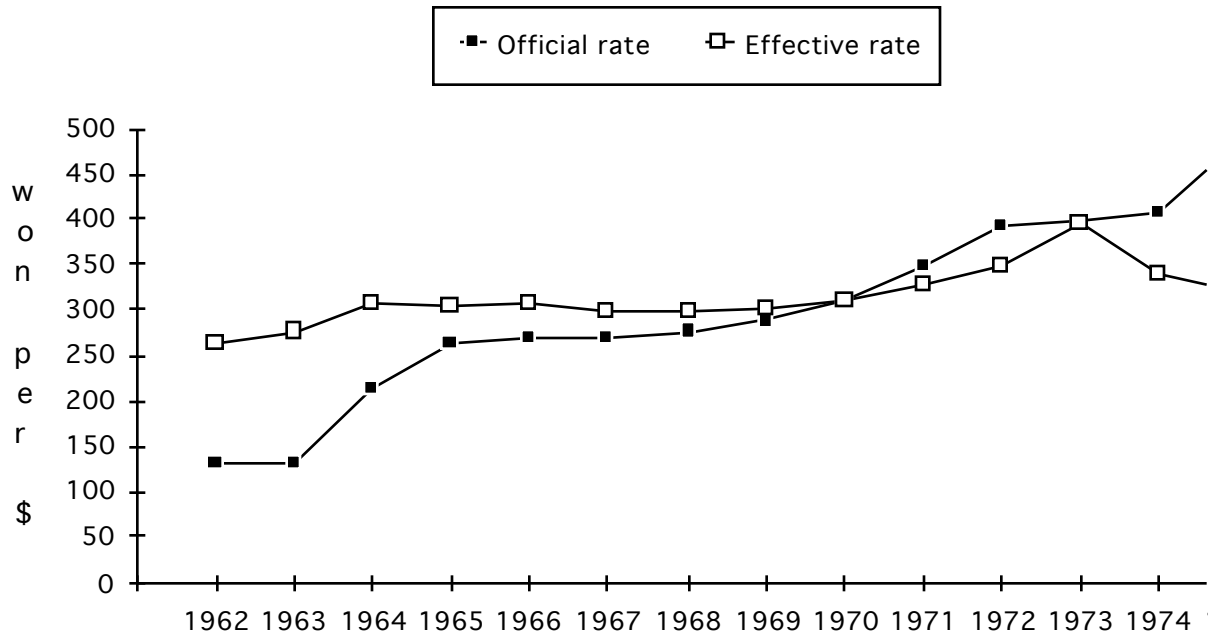
	Official Exchange Rate (nominal)	Indirect Tax and Tariff Exemptions per Dollar of Exports	Real Effective Exchange Rates*
1961	127.5	-	-
1962	130.0	7.6	264.2
1963	130.0	9.1	276.1
1964	214.3	8.2	305.3
1965	265.4	11.1	304.6
1966	271.3	14.4	305.1
1967	270.7	15.7	298.8
1968	276.6	21.5	298.7
1969	288.2	22.7	299.4
1970	310.7	21.5	307.9
1971	347.7	23.1	328.6
1972	391.8	23.7	348.9
1973	398.3	21.5	396.5
1974	407.0	19.1	338.4
1975	485.0	14.0	320.9

* Includes Indirect Tax and Tariff Exemptions.
Source: The World Bank (Westphal and Kim).

More recently, the increase in the cost of fuel, raw materials, and even capital goods imports during the past decade has been paralleled by a relative slump in the prices Korea could demand for its manufactured exports, worsening its terms of trade and obliging it to sell much more to gain just a little more. While the need for imports remained unchanged, possibilities of expanding exports were artificially constricted in various ways. The most obvious, and also most menacing, was the rise of protectionism in developed country markets.

FIGURE 4-1

Nominal and Effective Exchange Rates for Korean Exports



Source: Westphal and Kim (1977).

Such limitations clearly cut into Korea's potential sales and made it turn toward other markets and products. This explains Korea's attempts to shift toward the Middle East, Latin America, and Africa. An important source of Korean exports to developing countries has been the transfer of technology. For the five years from 1977 to 1981, total contracts for project-related exports amounted to $43 billion, while non-project-related technology exports[27] were estimated at about $8 billion.[28] Among the categories of project-related technology exports, the most important one has been non-industrial in nature, which has been transmitted via Korea's massive construction projects in the Middle East. In addition to projects to establish and operate productive systems abroad, Korea's technology transfer also included the form of capital goods exports accompanied by technical and managerial services.

[27] The term "technology exports" is used here in a broad sense to include the transfer of all forms of technical and engineering know-how including intergovernmental technical assistance and training.

[28] Westphal, et al. 1984, p. 504.

The origin of Korea's ability to quickly develop a competitive advantage in technology exports can be traced back to the early 1970s when the government called for a long-term plan to build a capacity to manufacture capital goods. The plan focused on import substitution of fabricated structural elements (including shipbuilding), heavy equipment used in industrial plants, and other social overhead facilities. The earlier policy bias against the domestic capital goods sector was gradually reversed: tariff exemptions on imported capital goods were eliminated, import-licensing was made more restrictive and, among other things, the government established specialized credit facilities to provide financing on competitive terms to domestic firms producing capital goods. Economic policy beginning in the early 1970s started to encompass the development of both import-substituting as well as export activities.

Emphasis was also placed on promoting both the assimilation of imported technology and technical services exports.[29] These measures were supplemented by other provisions dealing with the promotion of local research and development, the education and training of technical personnel, and the establishment of an infrastructure of scientific and technological institutions. Promotion of technology-related industries in Korea was seen as being in line with its dynamic comparative advantage, and the government began to use capital goods and technology exports as a strategy to develop industrial competence. The acquisition of technological capability was seen as being fostered most effectively from export activity.

Once the government decided as an official policy to accelerate the development of capital goods and related services, various schemes that had already existed for other exporters were quickly reinforced to benefit specifically the producers of capital goods exports. Such measures included preferential access to credit for the financing of investment in such industries, preferential export financing[30] as well as insurance and guarantees against trade risks,[31] and the government-initiated search for and negotiation of overseas contracts by prospective exporters. In particular, producers of overseas project-related exports have received tax credits up to 50% of their taxable profits and deferment of taxes on certain categories of exports-related income.

The government also used the large business conglomerate groups in Korea, known as Chaebol,[32] as the principal agents of capital and plant exports. Some of these conglomerates

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29 Two legislative acts passed in the mid-1970s, the Technological Development Promotion Act and the Engineering Services Promotion Act, contained such provisions.

30 According to a study (Westphal, et al. 1984, p. 510), in 1980 the basic interest rate charged to exporters of capital goods and related services by the Korean Export-Import Bank was 8% and that charged to the buyers was 8.5%, while the preferential rate on ordinary exporters was 12% and the nonpreferential rate was 24.5%.

31 The Korean Export-Import Bank, established in 1976, operates insurance and guarantee schemes, along with provision of export credit.

32 See Section 4-D.

were accorded the special status of an integrated trading company[33] that legally authorized them to combine production and overseas marketing activities. The role played by the Chaebol together with several Korean construction firms in expediting capital goods-related export activity has been overwhelming. According to a recent estimate,[34] 13 Korean firms were listed among the 201 largest international contractors, accounting for 8.1% of the value of international contracts won by these contractors.

Korea's success in technology exports was based on its technological capabilities gradually expanded through human and institutional capital accumulation. Export activity by enlarging the scope of market competitiveness stimulated indigenous technological effort. The earlier strategy of export-led industrialization thus resulted in the broadening and deepening of industrial competence, which further led to dynamically changing Korea's competitive advantage to more technology-intensive industries.[35] In this regard, government policies were instrumental in providing the driving force behind Korea's exports of capital goods and other technology-related projects, enabling Korea to rapidly adjust to dynamically changing comparative advantage.

The developing country market nevertheless could hardly replace the more lucrative markets in the United States and Europe. When President Chun Doo Hwan came to power in 1980 he had a mandate from the business community to hold the line on wage demands. Real wages in the industrial sector declined for about a year, giving exporters a breathing spell. However, Korea's planners recognized that the golden era of cheap labor would never return. Even if it did, prospects for labor-intensive export growth would remain bleak in view of mounting import restrictions, especially on textiles, in the developed countries. The nation's best hope for continued high growth, they believed, was to shift its export pattern from labor-intensive to high-technology products. This second economic takeoff was to be achieved by attracting vastly increased capital flows and technology transfers from abroad, and for this the government has drastically liberalized its foreign investment code.

Import Policy

The Korean government's policy, although essentially export-oriented, had not all been geared to the concept of a neutral free trade. Up to 1967 domestic industries were protected by direct import controls: imports were permitted on the basis of the "positive list" system, by which

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33 See the preceding section.

34 Engineering Export Promotion Council of India; Project Export News (July 15, 1981). The Hyundai group (ranked eight), followed by two other Korean firms, was the largest contractors among the developing countries.

35 Direct foreign investment and international subcontracting have not been important in most Korean exports. Nor was the technology transfer emanating from foreign investment a significant factor.

only the items enumerated would be allowed for import. The main items on the list were essential raw materials, energy, capital and intermediate goods. After adopting an unified exchange rate system in 1964, the government proceeded to institute incentive structures that favored use of imported capital and intermediate goods to develop efficient export industries at home. The incentive measures included the doubling of the so-called "automatically approved" import items (mostly capital goods), tariff exemptions on capital goods (automatic for exporters and for selected import-competing industries), and liberal licensing of imported capital goods financed by subsidized credits. While liberal on essential imports, the government's policy remained highly restrictive on agricultural and manufactured products which were considered import-substitutable. The Korean government continued with measures of import restriction: an overall import quota system, foreign exchange allocation, and import legislations to discourage consumer goods imports.

After 1967 as a result of international pressures for trade liberalization, the government introduced the "negative list" system by which the guidelines to exclude imports from automatic approval are to be stipulated. The main criteria for exclusion were the impacts on the balance of payments and on the international competitiveness of domestic industries. The "negative" system turned out to be inconsequential in actual measures of import liberalization: the proportion of imports excluded from the "negative" list started from 61.7% in 1968, falling to 49.5% in 1975, and rising back to 68.5% by 1980.[36] Import policy took on more restrictive features in the mid-1970s: faced with a diminished outlook for exports in the 1970s, government policy turned increasingly inward toward the domestic market. The government started ambitious programs to develop heavy, chemical, and capital goods industries to "deepen" Korea's industrial structure, thereby reducing the domestic economy's long-term import dependence. The inevitable short-term result was increased import dependence as the areas of the priority imports had to be enlarged. The bulk of freely importable items continued to consist of crude oil, intermediate goods for re-exports, and essential components and raw materials for "strategic industries." On the other hand, consumer goods imports accounted for only 3% of the total imports.

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[36] Korea's import policy in the '80s became more liberal, particularly after 1985 when the country began to generate trade surpluses vis-à-vis the United States. The import liberalization ratio rose to 80% in 1983, and to 95% in 1988 when the number of the restricted items under a negative list system, in which import-prohibited items are to be listed, was drastically reduced to a few hundred. The tariff rate continued to be reduced with the average rate for all imported products falling from 24% in 1983 to 18% by 1988. These measures notwithstanding, some imports, mainly the products in agricultural, chemical, machinery, and pharmaceutical industries, remained subject to restrictions either by inclusion in the negative list or through a series of protective laws and regulations. The basic thrust of Korea's trade policy continued to be a cautious and calculated management: nonessential imports would be allowed so long as the country can afford it and they would not severely injure domestic industries, disrupting domestic markets.

Along with the introduction of the "negative" system in 1967, tariffs began to be used to control of the patterns of imports. The table below shows Korea's tariff structures by sectors for 1968 and 1978. Since the nominal rates do not reflect the actual protection accorded to a domestic sector, estimated figures for effective protection rates (ERP) are also presented for the corresponding years.[37] The ERP represents the gain in value added as a result of tariffs on both inputs and outputs, as a percentage to value added under free trade.

Table 4-3 shows that the average nominal rate for the entire economy declined considerably, from 54.3% in 1968 to 35.3% in 1978. To conclude from this that Korean imports were liberalized would, however, be misleading; in terms of the ERP there had been a substantial rise in the extent of protection accorded to domestic sectors, from 9.0% to 24.1% during the same period. The ERP calculations further show that the durable consumer goods industry, followed by primary goods sectors, were increasingly heavily protected over the period. In contrast, minerals, energy resources, primary imports, and construction materials continued to have increasingly negative protection. Thus, Korea's tariff policy is consistent with its direct import control policy. The clear conclusion that emerges is: Korea's import policy throughout the initial two decades of development had been restrictive, and had been liberal only on imports essential for the development of its export and other "strategic" industries.

It is worth further examining the scope and the nature of support given to import-substitution industries, even though it was given on a scale somewhat played down in comparison to the attention given to export expansion. First of all, any domestic firm moving into a targeted sector that included import substitution industries could expect a suitable backing from the government, in the form of fiscal and financial subsidies and policy loans. Furthermore, to secure the domestic market, the government not only placed orders once production began, but also quickly protected the products with an armory of import barriers. These included a prohibited list of goods, quotas, and tariffs. The tariff system was carefully structured to provide higher levels of protection for manufactured goods that were being introduced for domestic production and lower levels for those that were not, very low levels on raw materials, capital, and intermediate goods, and very high levels on consumer and luxury goods that were not deemed beneficial to the economy.

The government, in particular, recognized the strategic and economic significance of promoting a rapid development of capital goods industries. To encourage domestic production in the machinery industry, the government, already in the late 1960s, began to restrict quantitatively the import of some machinery goods immediately upon the initiation of their domestic production. Those firms using domestically produced machinery were allowed a 10% tax deduction in their

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37 For the formula used, see Nam (1980).

TABLE 4-3

Nominal and Effective Rates of Protection by Industry

(unit: %)

	Nominal rate		Effective rate	
Sectors	**1968**	**1978**	**1968**	**1978**
Agriculture, fishery and forestry	36.5	25.7	17.9	60.7
Mining and energy	12.2	4.0	3.5	-24.4
Food processing	61.5	37.5	-14.2	43.2
Vegetables, tobacco	140.7	139.3	-15.5	29.4
Construction materials	32.2	26.3	-8.8	-19.3
Primary, intermediate goods	36.6	22.1	-18.8	-24.4
Secondary, intermediate goods	58.7	31.9	17.4	2.9
Nondurable consumer goods	92.3	48.0	-8.0	23.0
Durable consumer goods	98.3	46.3	39.8	118.9
Machinery	52.6	27.3	29.5	49.9
Transportation equipment	62.4	47.6	83.2	21.7
Total	54.3	35.3	9.0	24.1

Source: Nam, C.H. (1980).

investment. Previously, tariff and credit policies had favored the purchase of imported capital goods. The government proceeded to abolish tariff exemptions on some types of capital goods imported, creating at the same time capital funds to support the domestic producers.

This policy resulted in active investments in the machinery sector with a wider domestic market that provided a bias for further growth. As the economy expanded with a continued need to modernize production facilities and to increase productivity, the domestic demand for capital goods registered an upward trend, particularly after the start of government support for the development of heavy and chemical industry beginning in the early 1970s. The annual average increase rate of domestic demand for machine tools reached as high as 24% in the period between 1971 and 1981.

With a target set to fully localize the production of machine tools by 1990, the government enacted a series of provisions for promotional funds to encourage active research and development activity. Other measures included liberalization of imports of technologies mostly to be obtained through licensing agreements, and foreign assistance with production techniques. In 1977-1980, licensing agreements in the machinery sector accounted for about a third of all agreements approved in Korea.[38]

The government was also active in the promotion of technological development in the capital goods industry. In addition to the creation of such research institutes as the Korea Institute for Machinery and Metals and the Korea Advanced Institute of Science and Technology, long-term loans at low interest rates and fiscal concessions were offered to firms in the capital goods industry for their efforts for research and development.

Evidence for excessive protection accorded to machinery and equipment can be seen in the tariff rate structure of imported items. A World Bank study[39] shows that in the 1970s the domestic prices of many types of machinery were far below the import prices inclusive of tariffs. The products that exhibited negative implicit tariffs ranged from metal working and processing machinery (-52%) to textile machinery (-39%) to industrial machinery (-22%). These negative implicit tariff rates undoubtedly explained quality differences that may have existed between the domestic and imported items. In any event, greater protection seemed necessary in the early

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38 The total number of agreements during the period was 1974.

39 See Westphal (1977, pp. 2-14).

stage of development because of the industry's high dependence on imported capital goods,[40] which had limited domestic production of capital goods largely to low-grade products.[41]

In summary, the Korean government essentially pursued a mercantilistic trade policy based on the dualistic approach of pushing for exports while advancing with import substitution. The factor deterring import liberalization has been foreign exchange constraint. Korea's trade policy reflected a planned management, cautious and calculating. It only remotely reflects liberalization as defined in a classical textbook sense.

B. Financing and Credit Policy

Perhaps one of the most important instruments used for implementing sector-oriented industrial development in Korea was public sector control and allocation of credits. The government itself, with a budget representing one-sixth of GNP, allocated the same percentage of its budget to the spending for development projects. As already noted, the lion's share of this development spending went to transport and communication, energy, agriculture, and defense-related industries. By and large, however, the banking institutions, which were directly or indirectly controlled by the government, provided a predominant share of investment capital in industry. The domestic financing by banks, along with taxation and foreign borrowing, supported the major spurt of industrialization.[42] The prevalent form of financing was provisions of loans with subsidized interests and guarantees. Usually, these credit facilities were combined with other fiscal and tariff incentives, including public sector assistance in scientific and technical research.

A particular form of financing called "policy loans" deserves a special mention. This type of loan had exceptionally low interest rates and lenient repayment terms. The loan was usually supplemented by other forms of incentives if the particular product was considered worthy of domestic protection or could be turned toward exports. Policy loans were administered by government-operated specialized development banks, made available primarily for purposes of export financing and supporting key industries. An estimate (Hong 1979) shows that in 1972 the ratio of total interest subsidy associated with loans in manufacturing to the total fixed capital in that

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[40] The policy of blanket protection of capital and intermediate goods industries, especially heavy and chemical industries in the '70s, resulted in many forms of structural imbalances and distortions in the economy. In some instances the effective rate of protection was excessive for low value added and often inefficient, domestic industries. The protective system also ended up favoring those oligopolistic conglomerates in the heavy and chemical sectors rather than stimulating the development of other small and medium firms at large.

[41] By 1978, the effective rate of protection in the machinery sector was estimated at 47.4%, lower than that in India or Brazil. The actual level of protection may be considered much higher, however, since Korea also relied on nontariff measures for protection.

[42] Major financial reforms in 1964-65 drastically enhanced the intermediary role of banks in private capital markets.

sector exceeded 25%. The average annual increase in export credit reached as much as 40% of the increase in money supply between 1970 and 1976.

In terms of the hierarchical structure of the financial world, the Ministry of Finance sits on top, supervising and regulating all the activities of the banking system including those of the central bank (the Bank of Korea). More indirectly involved and more concerned with implementation of financial plans is the Economic Planning Bureau (EPB), since it defines the approaches and targets that become criteria for granting "policy loans" by the banking institutions, which are generally aimed at rendering special support to the "prioritized" sectors. For this purpose, the government established a group of "development banks." They provided qualified firms with loans and also held equity in these firms. For instance, in 1984 the loans from the Korea Development Bank accounted for as much as 15% of the nation's total outstanding debt. The Korea Long-Term Credit Bank has similarly been instrumental in tapping private capital to assist firms with loans and equity participation. The Korea Export-Import Bank represents another category of development banks that specialize in medium- and long-term credit for foreign trade transactions, with an emphasis on exports. These specialized banks receive funds partly from the government, from private deposits, and by issuing bonds in international financial markets.

Larger private sector banks, with a bulk of their credit given as "policy loans," were also drawn into the financing of industrial development and, to some extent, had to comply with orders and regulations from the Ministry of Finance. Thus, excluding the informal, curb-market loans generally available at exorbitant interest rates, the entire financial community, more or less, operated under some control and supervision of the government.

The system of "policy loans" for providing special support to targeted industries worked well for Korea in the early days of industrialization and, in effect accounted for half of the total bank lending. Without this public sector initiated financing it would not have been possible to develop light manufacturing industry, construction, steel, and shipbuilding industries, nor to build the basis for heavy and chemical industries in Korea. The system, however, contained several drawbacks. Since "policy loans" for targeted sectors were subsidized compared to other considerably more expensive loans, many worthwhile projects failed to be undertaken simply because they were not targeted for development. The sectors targeted for promotion mostly included relatively large-scale projects. Small firms were seriously handicapped in obtaining credit. Only recently, efforts began to be made to provide small firms with much easier access to bank loans.

A related bias in investment decisions that resulted from the undue emphasis on "policy loans" concerned the neglect of the microeconomic specifics in approving the worth of individual projects. The government's policy of targeting products specified only what sectors of the economy should be promoted for expansion. As a result, loans tended to be approved on the

basis of superficial compliance with the administrative guidelines and not on the merits of individual projects. These weaknesses were manifest in the late 1970s when a number of government-supported projects had to be discarded. The policy aim of the 1981 bank reforms was to alleviate distortions in investment allocation by broadening the realm of managerial discretion by the commercial banks.

Finally, the policy of favoring targeted enterprises was a mixed blessing. Policy loans encouraged excessive borrowings by firms, frequently resulting in an unstable debt-equity ratio. By the late 1970s, it was not uncommon to find large firms having liabilities five to ten times as much as their net worth. Such firms were burdened with interest payments excessive in relation to their equity, which eroded their profitability and made their operation precarious in bad times.

C. Foreign Investment Policy

Korea is poorly endowed with natural resources. It must rely on the import of foreign resources and technologies. In the initial two decades of Korean development, the main source of financing imports had been foreign savings. Private savings in Korea were negligible before 1965.[43] After the interest rate reform in 1965, which in essence guaranteed positive real interest rates, household savings soon quadrupled, reaching 3.5% of GNP in 1967 and 4.5% in 1976.[44] Nevertheless, domestic savings remained insufficient to cover the deficits of the government and the corporate sectors, which accounted for 7.6% in 1976. Korea had been in continuous need of foreign capital and technologies as its economy expanded.

Until the early 1960s, capital inflow took the form of massive foreign aid for relief and rehabilitation of the economy. By the mid-1960s the concessional aid was phased out, gradually replaced by soft loans in limited amounts. In addition to the loans channeled through such donor agencies as USAID, the Japanese Overseas Cooperation Fund, the World Bank, and the Asian Development Bank, a growing share in loans took the form of supplier credit from the American or Japanese export-import banks. The real break in financing avenues for Korea came with the conclusion of the Japan-Korea Normalization Treaty in 1965. Korea could use its Property Claim Funds (war reparations) in establishing basic industrial and communication infrastructure.

During the 1970s when Korea's progress became evident and was proving its credit worthiness, it was able to obtain more commercial loans. Government policies concerning loan capital were open and unrestrictive. There were no shortages in the demand for loans with reasonable terms. The inflow was massive in the late 1970s, with the outstanding external debt rising to $37 billion in 1982 from a mere $4 billion in 1972. The debt burden remained

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43 Domestic saving as a percentage of GNP rose from a mere 3% in 1962 to 16% a decade later.

44 Bank of Korea, *Economic Statistical Year,1976.*

manageable as export earnings continued to grow rapidly: the debt-service ratio was 18% in 1972 and fell to 15% a decade later.

TABLE 4-4

Sources of Foreign Direct Investment (1962-82)

(unit = million dollars)

Country	1962-1966	1967-1971	1972-1976	1977-1980	1981	1982	Total	Share (%)
Japan	0.7	40.8	376.9	180.3	34.6	41.6	675.9	47.1
U.S.A	21.9	12.4	67.9	122.9	85.2	107.6	418.0	29.0
Netherlands	0.0	6.3	58.7	37.6	1.3	1.5	105.3	7.4
Hong Kong	0.0	0.3	3.5	8.8	8.1	24.5	45.1	3.2
West Germany	0.3	2.4	2.8	12.3	3.1	3.1	24.1	1.7
Others	0.1	10.5	55.4	80.5	13.1	9.4	168.1	11.6
TOTAL	23.0	72.7	565.2	442.4	145.3	187.8	1,436.5	100.0

Source: Ministry of Finance.

Although relatively unimportant in amounts compared to the loan, direct foreign investment has been instrumental in promoting the development of indigenous industry in a different way. The first serious efforts to attract foreign investors were made beginning with the launching of the First Development Plan in 1962. Reasonable conditions that included tax relief, duty-free imports of capital goods, easy remittance of profits, and other incentives were offered. Foreign ownership was restricted to less than 50%, except in the free export zones where full ownership by foreigners was permitted.

It took some time, however, for an appreciable amount of direct investment to flow in. By the end of 1981 total direct foreign investment amounted to US $1.4 billion. As shown in Table 4-4, Japan accounted for close to a half of the total foreign investment in the period between 1962-

1980, followed by the United States with a quarter share. While investment opportunities were open in most sectors, there was a clear preference for investment in manufacturing industry. As a result, manufacturing received a predominant share of foreign investment; then textiles in the early period, and electronics and petrochemicals in the later period.[45]

The basic policy on foreign investment followed the line of an outward-looking strategy for development. Foreign capital was welcomed as long as it could contribute to the development of "priority" sectors, the transfer of technologies, and the enlargement of marketing contacts. In recent years, in a bid to facilitate the realignment of industrial structure, the government further intensified measures to attract foreign investment by dismantling many restrictions on capital inflow.[46] Korea's investment policy started to aim at inducing the import of technical knowhow through joint-venture projects, as Korea entered into a new specialization in more sophisticated capital goods and high-technology industrial products. Emphasis on exports was not forgotten either. Foreign investment in export-oriented industries has always been welcomed in Korea.

Direct foreign investment was a more recent phenomenon in Korea,[47] and had not been important compared with such countries as India or Brazil. In Korea, foreign companies have participated mostly in joint ventures. However, direct investment can continue to play a particularly important role in one vital area of Korean development. Foreign investors have been instrumental in introducing production technology and management techniques, and in facilitating the transfer of overseas information and knowledge.

To conclude, what then is the overall assessment of foreign capital inflow in Korea? As a result of the earlier borrowings, Korea in the early '80s turned into a major debtor nation and had to remit interests, profits and royalties in substantial amounts to foreign investors. Although over the years the amounts involved in foreign debts and investment rose rapidly, so did the ability to handle them as the economy grew more rapidly. Unlike the situation in Latin American countries, however, Korea has actually been freeing itself of external dependence. While savings from

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[45] Of the 855 industries listed in Korea's Standard Industrial Classification, 521 items including large-scale projects in capital-intensive industries such as machinery, metals, electronics equipment, and chemicals, energy related or export-oriented projects, projects for manufacturing foodstuffs and medical products, or projects contributing to the development of domestic resources or the commodity distribution system, have all been open to foreign investment.

[46] In this regard, the recent Foreign Capital Inducement Act (1982) added three important benefits to investors: the first benefit was allowance for foreign equity sharing up to 100%. This provision applied to those projects introducing high-level technology into Korea, or those undertaken in free export zones or otherwise contributing to increased exports. The second provision exempted foreign invested enterprises from income and corporate and capital gains taxes as well as from import duties under reasonable conditions. Provisions covering a technology contract were more generous. Foreigners could be exempted from wage and salary income taxes. Finally, the legislation guaranteed the outward remittance of dividend and the repatriation of capital.

[47] The government, confident of an improved investment climate in Korea, set itself an ambitious target of attracting US $2.5 billion in foreign investment during the Fifth Plan period (1982-1986).

foreign sources were three times as large as the domestic counterpart in the early 1960s, two decades later the relationship was reversed with domestic savings contributing the most to capital formation. In Korea, foreign borrowing has been put to use mainly for development of industry and vital infrastructure. The expansion of foreign investment has meant increases in employment and income in Korea.

D. Business Policy

An important aspect of Korean industrial policy concerns the government's relationship to business. In Korea, the large industrial conglomerates known as Chaebol, usually represented by the most dynamic and aggressive entrepreneurs, play the crucial role in the industrialization process. They have often in the past been used as an instrument of government policy, and in return the government inadvertently strengthened the hand of these conglomerates.

Currently there are some fifty major conglomerates with each unit composed of half a dozen to fifty member firms that are horizontally and vertically integrated in the industrial structure.[48] The breadth and speed of the rise of the Chaebol in Korea seems unprecedented in the history of enterprise. As Table 4-5 shows, in the period between 1973-1978 the annual rate of growth in value added contributed by the 10 largest conglomerates was as high as 30%. In terms of the share of their contribution to GDP, they accounted for 14% in 1973, rising to 23.4% by 1978. The top 46 firms, taken together, accounted for 31.8% of GDP in 1973, which rose to 43% over the same period. These measures clearly show the extent of progress in industrial integration as well as the process of concentration of wealth in Korean industry.

The phoenix-like rise of the Chaebol was mainly caused by government policies. In the earlier days of industrialization, the business environment was conducive to opportunities for forward or backward integration in industry. A broad spectrum of sectors opened up for entrepreneurs to participate in, as export demand suddenly rose in diversified areas. Access to financing was made easy, as the government provided easy credit in efforts to promote exports. Once the government was convinced the entrepreneur could succeed, this would usually have a snow-balling effect, success breeding success, since the government credit was largely based on past achievements. This type of credit policy made it possible for successful entrepreneurs to launch several ventures at the same time, which eventually led to a race for empire-building in business.

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[48] The largest four conglomerates are Hyundai, Dae Woo, Samsung, and Gumsung, which together recently accounted for close to 10% of total exports. Furthermore, 10 Korean conglomerates were recently listed among the top 500 corporations in the world excluding the United States in *Fortune* magazine.

TABLE 4-5

Contribution to Value Added by Conglomerates

No. of conglomerates	Annual growth rate (1973-1978)	As percentage of GDP	
		1973	1978
5	35.7	8.8	18.4
10	30.0	13.9	23.4
20	27.5	21.8	33.2
46	21.4	31.8	43.0
GDP Total	17.2	100.0	100.0

Source: Korean Development Institute.

Trends toward concentration in manufacturing industry can be discerned from Table 4-6, which reports the annual average growth rates in manufacturing output and employment during the 1967-79 period. The data show that larger firms had grown much faster than smaller ones, indicating trends toward concentration in Korean industry. In terms of output, the largest group of firms employing more than 500 persons grew at an annual rate of 27.6% during the period compared to 11.1% for the smallest units employing fewer than 9 persons. In Korea any establishments employing less than 500 persons are considered as small and medium units. The table thus implies the cumulative decline experienced by small and medium firms in Korea. Despite the alarming trends of concentration, the government continued to support larger units. Larger firms with scale-economies and cost-efficiency could be counted on to more successfully complete crucial projects for national development. Funds flowed more readily into larger companies, since they were generally in a better position to outbid smaller firms in government-financed project contracts.

Policies for promoting industrial integration appeared necessary for the development of heavy industry, as Korea was preparing to move into advanced sectors. Economic logic also favored large-scale production. A minimum scale in plant size was required in such heavy sectors as automobiles, steel, and shipbuilding. The Chaebol had to compete in international markets

with foreign multinationals which tended to be large in comparison with their Korean counterparts. Firm size was also an important factor to consider in joint ventures with foreign partners, since there was a danger that, if too large, the latter might dominate and control their domestic counterparts.[49]

The theoretical case for supporting large-scale production is illustrated in Figure 4-2. Suppose a noncompetitive domestic firm in a decreasing cost industry is facing the marginal revenue curve, MRd, in the domestic market and that in the foreign market shown by MRf. Given the marginal cost curve MC, the level of initial output is given by distance OD at which aggregate marginal revenue MR intersects the MC curve. With a subsidy to the firm, the marginal cost curve is shown to shift downward to MC' with a new level of output given at OG. The increased output DG is made up of BE in the domestic market and CF in the foreign market.

The Korean government's preferred method of supporting a project was to make credit available on favorable terms to specific borrowers. During the period of rapid growth, the banks, whether public or commercial, had remained under the government's tight control, and credit was distributed mainly in line with the planned priorities. The credit standing and connections of businesses played a key role in obtaining credit, and naturally large firms had the edge over small, unknown ones.

While the policy to support big business may have been a factor contributing to rapid industrial growth and the success in the world market, it also served to cause a serious structural imbalance in the Korean economy. It led to the creation of industrial dualism, in which large and powerful conglomerates have virtual control of the market and the remaining masses of small and medium firms are relegated to an insignificant status.

There is another problem with large companies in Korea today that is attributable to the government's support of big business in the past. As a result of easy access to bank lending, large enterprises in Korea have been accustomed to depend heavily or external funds. According to a recent survey,[50] in 1980 external funds—those borrowed from domestic banks and foreigners—for the top 50 enterprises in Korea accounted for as much as 85% of the total. This ratio was much higher than that of Japan or the U.S.A., which showed 38.1% in 1977 and 29.1% in 1974 respectively. Furthermore, the degree of dependency on external financing by large companies generally increased over the recent years. High debt-equity ratios have adversely affected profitability in large companies and raised the risk of bankruptcy in bad times.[51]

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[49] Another important benefit from supporting big business was the political funds the President could count on from them.

[50] *Hankook Ilbo,* September 27, 1981.

[51] Alarmed by the growing concentration of wealth, the government, beginning in the early 1980s, instituted policy reforms to pursue countermeasures against trust formation and to

TABLE 4-6

Growth Rates in Manufacturing Output and Employment by Size of the Firm (1967-79).

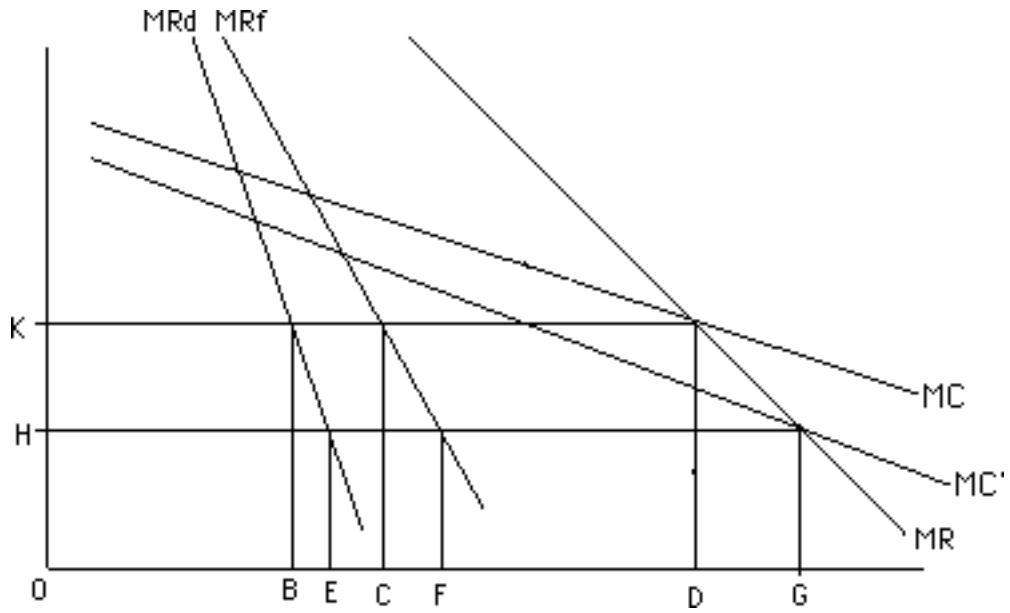
Firm size in persons	Output (%)	Employment (%)
5—9	11.1	-1.5
10—19	13.9	2.1
20—49	20.1	7.7
50—99	22.7	9.9
100—199	25.8	11.8
200—499	22.1	12.4
over 500	27.6	15.0
Total Average	24.0	10.4

Source: Economic Planning Board: *Report on Mining and Manufacturing Census and Survey.*

support small and medium firms. Small firms currently account for more than 95% of the total number of enterprises in Korea, employing roughly a half of its industrial work force and producing about a third of the total industrial output. New industrial policies see increasing roles of small and medium firms in supplying components and semifinished goods to large units. The government has been promoting technical and management extension services through such organizations as the Small and Medium Industry Promotion Corporation and the Korean Production Technology Service Corporation. It has also provided financial support for training managers of small and medium firms, and for their operational activities (market surveys and feasibility studies) in the forms of equity capital or convertible bonds by a joint-venture investment of the Small and Medium Industry Bank and the Technology Development Corporation. Another form of government support for small businesses has been the granting of a collective monopoly over certain products, including leather products, shoes, towels, and toys. Big businesses must obtain permission to expand production of any one of the protected lines, and the list of protection, currently numbering some 110 items, is expected to increase.

FIGURE 4-2

Subsidy Effects in a Decreasing Cost Industry.



E. Labor Policy

Korea's early strategy of emphasizing labor-intensive manufacturing exports resulted in rapid increases in labor demand in the industrial sector and rural labor quickly began to be absorbed into the urban industrial sector. As excess labor demand caused upward pressure on industrial wages, this threatened Korea's competitive advantage in labor-intensive exports. As a result, the government's labor policies had to cope with the changed labor market conditions. This section examines government policies that have affected the labor market, employment conditions and wages, and their implications for industrial development in Korea.

Productivity and Wages

In Korea, growth in output and employment in the industrial sector has been much faster than that in the non-industrial sector. Rapid growth in industry has exerted upward pressures on industrial wages. Nonetheless, except during the past two years, real wages, in a sluggish response to labor markets, tended to lag behind productivity increases.

The industrial real wage rate remained virtually unchanged during the earlier period of industrialization (1961-1966). Between 1967 and 1978 the real wage rate increased by more than 370% (Table 4-7 and Figure 4-3). It rose, however, in a pattern of lagged response to spurts in productivity growth throughout the period. It is significant to note that labor productivity grew almost 50% faster than the real wage rate. After 1977 real wages gained some ground over productivity increases. The recent gains in wages reflect the impact of new government policy for structural adjustment in labor markets, which was instituted in response to increasingly militant Korean labor unions' demands.

TABLE 4-7

Real Wages and Labor Productivity in Manufacturing

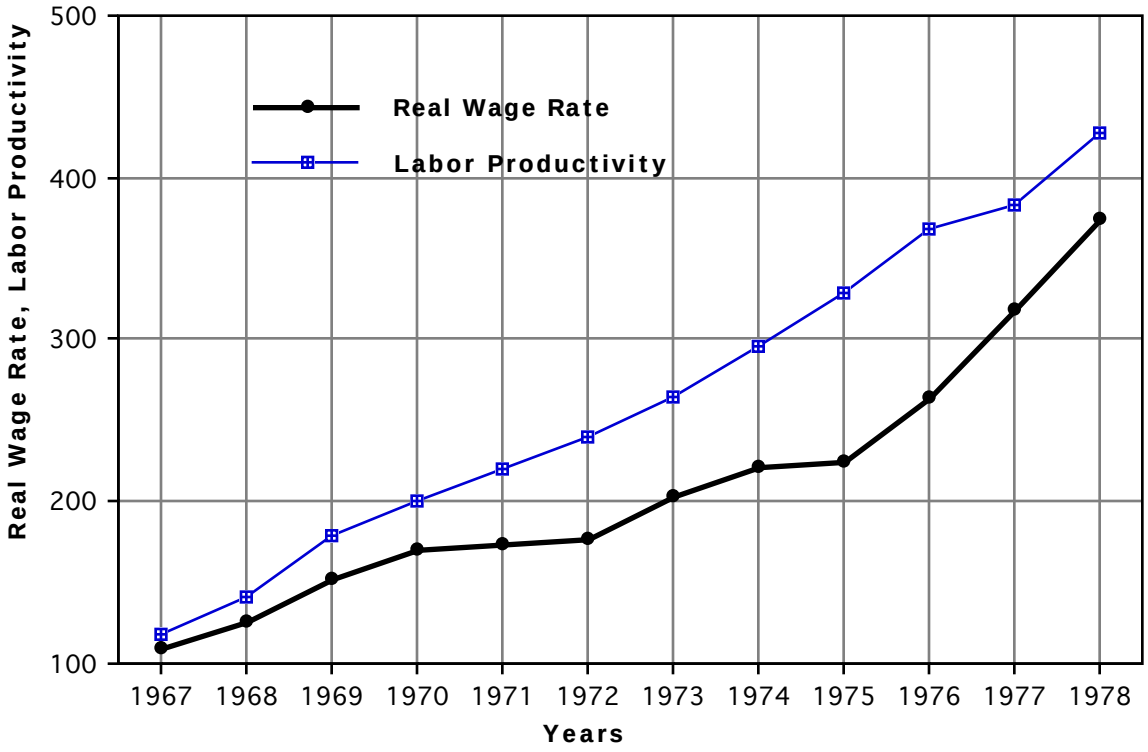
	Rate of change (%)		Index (1966=100)	
	Real wage rate	Labor productivity	Real wage rate	Labor productivity
1967	10.4	17.7	110.4	117.7
1968	13.9	19.8	125.7	141.1
1969	21.7	26.5	153.1	178.4
1970	11.5	12.6	170.6	200.8
1971	2.4	9.8	174.7	220.5
1972	1.9	9.0	178.0	240.4
1973	14.4	10.4	203.7	265.4
1974	8.9	11.2	221.8	295.1
1975	1.5	11.6	225.1	329.3
1976	17.7	11.9	265.0	368.5
1977	20.6	3.9	319.6	382.9
1978	17.1	11.5	374.3	426.9

Source: For wage series, Bureau of Labor, and for productivity series, Center of Productivity.

The slower growth in real wages relative to that in productivity has been reflected in labor's declining share in output.[52] As shown in Table 4-8, wage earnings as a percentage of either gross output or value added in manufacturing steadily declined in the period from 1958 to 1976. For instance, labor's share in manufacturing value added declined from a high of 36.6% in 1958 to a low of 23.0% by 1975. The recent data show only slight increases in labor's claim on output.

FIGURE 4-3

Real Wages and Labor Productivity in Manufacturing



Another aspect of Korea's low-wage-based growth strategy relates to the long work hours of a Korean worker. Up to the early 1980s, the Korean worker on average worked 50-53 hours per week, which exceeded the averages in other industrializing countries in Asia (Table 4-9). Hard work and efficiency have become the hallmarks of the Korean labor force. These workers were, nonetheless, underpaid in relation to their productivity. Thus, the cheap labor

[52] Note that the rate of change in labor's share of GDP reflects the difference between the rates of change in real wages and productivity.

TABLE 4-8

Wages Earnings in Relation to Gross Output and Value Added in Manufacturing

	Wages as % of gross output	Wages as % of value added
1958	-	36.6
1960	11.3	30.9
1963	9.7	26.2
1966	9.1	24.4
1967	9.7	25.8
1968	10.0	25.5
1969	10.2	25.1
1970	10.3	25.1
1971	9.7	23.4
1972	9.4	23.5
1973	8.7	24.8
1974	7.9	24.2
1975	8.0	23.0
1976	8.6	24.8

Source: Korean Industrial Bank, *Census on Mining and Manufacturing, and* Economic Planning Board, *Annual Reports.*

argument is indeed plausible in accounting for Korea's competitive edge in labor-intensive exports, especially during the early industrialization period.

The declining wage share can be explained by the repressive wage policy of past regimes in the context of the weak, ineffective roles played by Korean trade unions. Also, the stagnant real wages in the 1960s can be attributed to the excess supplies of rural labor to industry at that time. The argument of redundant rural labor cannot, however, explain the declining trends in the relative position of industrial labor in subsequent periods. The rural sector in Korea began to experience shortages of its work force after about 1967 when the urban labor market started to be tightened, exerting upward pressures on industrial wages. The "hard state" in Korea continued to guarantee profits and to reduce entrepreneurial risk by keeping wages low.

Labor and the State

Trade unions in Korea had never been a strong political force throughout the period in consideration. Historically, Korean unions had not been concerned so much with the issues relating to working conditions or wages as with such abstract ideas as the cooperation of labor in working towards an egalitarian industrial democracy. Also, there had been no strong tradition of labor movements in Korea. Workers in general had too low a level of class consciousness to join trade unions. As late as 1986, officially registered union members accounted for only about 20% of the total industrial work force. The general pattern of labor organization in Korea is that unions tend to be organized at the enterprise level. Collective bargaining is carried out by local unions within an enterprise. There has been a general lack of coordination of union activities at the national level. This internal company unionism precluded the possibility of the unions creating a united front on common economic and social interests, thereby diminishing the unions' impact on national policy decisions. Moreover, critics have argued that the existing unions that claim national representation have more or less played the role of political puppets subservient to management and the government. For this reason, a feeling of apathy and insensitivity towards union activities has prevailed among rank-and-file union members.

TABLE 4-9

Per Worker Man-Hours in Selected East Asian Countries

	1963	1964	1965	1966	1967	1968	1969	1970
South Korea	50.3	56.0	57.0	57.4	58.8	57.6	56.3	52.5
Philippines	43.6	43.4	45.6	46.7	46.7	-	-	-
Singapore	47.7	47.3	47.2	47.4	47.4	48.3	49.2	-
Thailand	45.7	45.7	45.7	51.3	51.3	-	47.8	-

Source: *International Labor Office.*

The past authoritarian regimes in Korea actually promoted the internal company unionism as a useful means of controlling labor movements. Park's regime in the early 1960s was apprehensive that trade unions might develop the ability for mass mobilization in political affairs. It actively prevented unions from formulating and promoting policies on issues related to national development.

As for the relationship between government and labor, a distinction must be drawn between the cases of public sector and private sector enterprises. The public sector, in spite of the recent efforts for denationalization, still occupies an important position in the national economy. It commands a substantial share of the country's total industrial productive capacity. In these enterprises, the government exercises a directing and guiding influence on the allocation of resources, including employment and payments of labor, in accordance with national priorities. Not only is work stoppage illegal, but also the government finds the solution to labor disputes more or less as it sees fit. There has been no clear evidence that the government would be willing to relax its "command orientation" in the public sector.

Within the private sector enterprises, both management and labor are supposed to reach mutual agreement on matters related to working conditions and wages. But the enterprises where these matters require an agreement between both sides have in reality constituted a small fraction of the total, and in other firms the management has simply informed the union of its decisions on wage- and work-related issues. Even in cases where joint consultation between both parties was allowed, union representatives were passively included in decisions. For practical purposes, joint consultation has often worked as a rather one-way communication from management to labor. In the cases of a dispute deemed of relevance to national security, the government has frequently intervened as an arbitrator. It has usually taken sides with business interests, since to do so has often been considered to be in the national interest. The state's lack of interest in labor is evident if one examines the modern history of Korean labor legislation. As compared with industrializing countries in Latin America, the scope and coverage of legislation related to welfare conditions of the worker have not been extensive in Korea. Even the minimum wage legislation in Korea is of relatively recent origin.

Reflecting such tendencies in both labor-government and labor-management relations, labor conflicts steadily increased since the early 1960s. Between 1966 and 1971 the total number of industrial disputes that involved negotiations with labor unions was 675, out of which in 66 cases actual work stoppages took place.[53] In about 70% of these cases, the main cause of dispute concerned wages. The rather low proportion of work stoppages seems to be explained by the government's upper hand methods of settlement. In an attempt to expedite the

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53 For data on industrial disputes, see the Bureau of Labor, *Yearbook of Labor,* 1978.

settlement of disputes, the government has provided various institutional mechanisms, such as Wage Boards, Industrial Tribunals, and the Labor Adjustment Committees. These mechanisms have not, however, offered a fitting means for direct involvement of workers. The available evidence indicates that in the majority of these settlements workers' substantive interests have not been satisfactorily defended.

During the early 1970s, as the average real wage rate began to rise in response to tight labor market conditions, Korea was newly threatened with the rapid deterioration of its competitive edge in labor-intensive exports. The government quickly enacted a series of measures to restrain increases in wage rates by curtailing the power of the trade unions. An example of this was the 1971 Special Emergency Law enacted under the umbrella of a series of national security provisions: In a situation of emergency threatening national security, the settlement of labor disputes would automatically fall under the jurisdiction of the government-controlled Labor Tribunals; open walk-outs would then be illegal; other forms of restrictions would be imposed on collective bargaining; and special rules were stipulated in dealing with the foreign-owned or publicly-owned enterprises, which would prohibit walk-outs by workers employed in these enterprises.

In an attempt to appease labor, the government introduced a series of paternalistic labor laws, including the upgrading of wage structures more in line with the market conditions. As Korea's comparative advantage began to shift into more capital-intensive industries, unlike the situation during the industrial take-off of the 1960s and early 1970s, it had no longer much to gain from a policy of wage restraint. The average real wage rate in fact rose quite rapidly, in contrast to the early period of export drive. Despite these new measures, the frequency of labor conflicts continued to rise. For example, between 1975 and 1979 more than 5,000 cases of labor disputes were reported. In about 10% of these cases, work stoppage took place. As before, the predominant cause of the disputes was demands for higher wages.[54]

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[54] The labor movement in Korea took on a new dimension in recent years as the country entered a period of political liberalization. The state strategy of labor containment worked well in the earlier days of labor surplus under a political regime possessing a highly developed repressive capacity. In the environment of political liberalization, the grip of the state apparatus over civil society is being loosened, and in the case of Korea a labor shortage, particularly for unskilled workers, has been growing for some time. Thus, the sudden eruption of labor disputes witnessed recently was a natural consequence of these developments.

5. Policy Implementation: Approaches and Institutions

A. Organizational Structure

Plans and strategies exist elsewhere. However, what is probably unique in the case of Korea, certainly different from most other countries, is the ability to get the plans and strategies put into practice. The idea of effectively organizing and managing an economy started with Park Chung Hee when he came to power in 1961.

Among his earliest policy measures was the creation of the Economic Planning Board (EPB), as a mechanism for examining the state of the economy and drawing up appropriate plans for improving it. The EPB has a substantial budget of its own with talented and technically trained bureaucrats as well as access to support from other ministries and academic institutions. The director of the Planning Board also assumed the position of deputy prime minister of the cabinet, which enabled him to pull rank on his colleagues. This assured the EPB's effective coordination with each ministry which had its own special planning unit for designing and implementing the plans at the ministerial and lower levels. The biggest strength of the Planning Board has, however, been the interest and support of the President. The Board usually dealt with what he considered to be the most important policy matters.

A significant fact to note is that the bulk of the planning work since the early 1960s has been carried out by young Koreans trained in economics and planning. Before the existence of the Planning Board, foreign experts had been invited to draw up more sophisticated plans, which could hardly be faulted on technical grounds. Apparently, what made these plans inadequate was the lack of understanding of how Koreans thought and behaved.

Although the entire process of planning gives an appearance of a highly centralized organizational structure, it has been the ministries and public sector enterprises that have been entrusted with the responsibility of getting specific projects done effectively and efficiently. Among the ministries, more heavily involved in the design and execution of national planning have been such ministries as Finance, Commerce and Industry, Construction, Agriculture and Fisheries, and Energy and Resources.

Public enterprises are generally supervised and controlled by one of the special development banks. They generally enjoy a certain degree of autonomy to do their job as professionally as possible. Their tasks, in all cases, are intimately related to the planning of economic development, provision of basic transport and communications, essential services, utilities and banking, and sometimes even engagement in productive operations like mining or manufacturing.

B. The Framework for Policy Formulation.

At the outset, it must be emphasized that all Korean governments since independence in 1945 had to be ideologically committed to maintaining a capitalist economy in which the private sector played a central role. Politically and economically, the regime had no options but to remain comparatively liberal.

In this context, planning in Korea apparently played the role of providing little more than a framework, leaving most practical decisions in the hands of private economic actors. Thus, plans were supposed to indicate only directions, offering incentives to those who complied with them, but not, in principle, forcing anyone to follow them. Plans simply showed where the economy was headed and what it goals should be. For instance, the annual Overall Resource Budgets and management plans drafted by the EPB indicated precisely what the government intended to do during the planned period and what contribution it expected from the private sector and general public. There were also documents like the Korean Development Institute's 15-year projections for 1977-1991 and the EPB's projections up to the year 2000, which provided a longer term framework consistent with various five-year plans. Of course, aside from the role of planning in providing a general framework for policy directions, more specific laws, regulations, and directions had to be formulated to promote exports or other priority sectors, channelling the efforts of various ministries and those of the individual enterprises dependent on them in the direction consistent with the planned goals.

Any national plans, if they are to be implemented, should be based on as much of a broad-based social consensus as possible. That is, however sophisticated and well-designed the plan may be, if it lacks a broader view that integrates and reconciles diverse social interests, it is likely to fail. In the case of the Korean planning, the first task faced by the planners was obtaining the views and feedback from diverse interest groups. This implied receiving feedback from and interacting with local leaders and various advisory committees that usually consisted of officials, industrialists, businessmen, and academics. What proved most effective in influencing the process of decision-making turned out to be a myriad of lobbies established by various interest groups, such as agricultural cooperatives or trade associations. And, while usually reticent on political issues, the press, interest groups, and politicians freely expressed their views on economic issues.

Once the goals of the policy were agreed upon or at least understood by the private sector leaders, the planning process focused on the internal consistency between the overall policy framework and the goals set at sectoral or firm levels. Here again, the planning was based on both the "top-down" and "bottom-up" approaches. In the early plans (the First and Second

Five-Year Plans), the drafted plans with the details on the sector-level targets[55] were subjected to the reviews of industry committees typically composed of engineers, economists, technical experts, ministerial officials, and industrialists before the targets and estimates of the coefficients of variables in the plan model could be accepted for implementation. More importantly, the preparation of planning for the sectoral profile gave industrialists a needed opportunity to review investment prospects for various industries.

C. Implementation

Given the basic policy orientation of maintaining a capitalist economic system in Korea, the plans provided a framework for the directions of policy and the overall procedures of implementation. Incentives were offered to those who complied with these, but there were, in principle, no mechanisms for enforcing complete cooperation from the private sector.

The implementation of the plans, however, was more effective when it had to be executed within the public sector, which included a myriad of state-run enterprises. Heavy pressures were exerted on bureaucrats to execute their jobs well and, in many cases, to complete at least the agreed-on targets. The most influential administrative institution has been the tax authorities, which periodically inspect the returns of all companies.

Thus one way or the other, the government was able to prevail on the private sector to follow its policies. Indeed, getting the private sector to fall into line could not be accomplished without a great deal of social tension. For instance, when import substitution was the government strategy, firms were urged either to produce import substitutes or to make purchases from local manufacturers even if their prices were higher and the quality not quite as good as imports. With the switch to export promotion, industrialists were encouraged to sell more abroad even if this was a completely new activity for them and did not look profitable. Strategic industries were advised of the advantages of diversifying and upgrading, and quickly reprimanded if they did not.

Apart from the strong hand the government wielded over the private sector, what held together the close public-private sector cooperation was a shared interest in a strong and prosperous economy from which all would benefit. The recognition of priority for economic development was not solely the result of determination at the top. In the earlier phases of modernization, it was conceded by all segments of society that there were indeed advantages in working together for the good of all. It was considered desirable to set suitable priorities, if necessary, by planning and policy. It was helpful for everyone to know in which direction the

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[55] For instance, in formulating the Second Five-Year Plan, a comprehensive resource planning framework based on a sophisticated dynamic input-output model was employed to calculate the required amount of investment at the sectoral level.

economy was heading even if some did not care to follow. No businessman would have made his own decisions without at least some understanding of development plans and strategies.[56]

If the coherence of the planning as well as the effectiveness of policy implementation are to be judged on the basis of how closely the targeted goals have been achieved, the Korean case can be claimed as a success. Comparisons between planned targets and actual performances are shown in Table 5-1. In all the plan periods except that of the Fourth Plan, which mainly coincided with the recent world recession, the economy's performance in GNP, exports, and industrial output actually exceeded the target goals by substantial margins.

6. Final Reflections: Myths and Realities.

A. The Myths of Korean Development.

This paper has made a point of the instrumental role played by Korea's development strategy and approach to policy implementation in attaining such phenomenal success. In summary, the Korean government's role in development can be discussed in terms of the firm and stable commitment of the political leadership to economic development and the effective exercise of power in influencing economic behavior, while maintaining flexibility in the structural adjustment process to cope with changing global markets. The "growth-first-via-industrialization" strategy adopted during the initial stage of development made good sense in a resource-poor economy with widespread poverty. The dominant courses of government action under a "hard state" rule consisted of eclectic recipes of "carrots" based on an extensive private incentive system and "sticks" based on regulation and planning by direction.

A larger issue that remains to be answered is: Why has Korea succeeded while other developing countries pursuing similar policy measures have been less successful? In drawing lessons for other countries, it is important to keep in mind the interacting nature of various socioeconomic factors that directly and indirectly contributed to the positive outcomes of government polices. Nonetheless, some factors seem to stand out as representing a situation unique to Korea, with its replicability in other country contexts questionable. At the same time, some myths about Korea's development must be dispelled in order to place its lessons in a proper

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[56] By the late 1970s, however, it became clear that the implementation machinery was working too effectively. Private companies blindly followed the government's lead without paying much attention to the underlying economic ills characteristic of inflation and distortions in the economy; too many production units were crowded into too few strategic sectors, resulting in too much capacity too fast. Some of these sectors did not really possess a comparative advantage, revealing distortions in the allocation of resources. Excessive aspects of the command structure were gradually being discarded in favor of more initiatives from the private sector, and businessmen were urged to pay more heed to market signals and profits.

perspective. The following evaluation will begin with dispelling some popular myths about the Korean experience.

TABLE 5-1

Comparisons of Planned Targets and Performance (1962-1981)

(unit: real annual growth rate; %)

	The First Plan (1962-1966)		The Second Plan (1967-1971)		The Third Plan (1972-1976)		The Fourth Plan (1977-1981)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
GNP	7.1	7.8	7.0	9.7	8.6	10.1	9.2	5.5
Agro-Forestry and Fishery	5.7	5.8	5.0	1.5	4.5	6.1	4.0	0.1
Mining and Manufacturing	15.0	14.3	10.7	19.9	13.0	13.0	14.2	9.7
Manufacturing Alone	15.0	15.0	-	21.8	13.3	18.7	14.3	9.9
Social Overhead and Others	5.4	8.4	8.8	12.8	8.5	8.5	7.8	5.2
Population	2.8	2.7	2.2	2.2	1.55	1.7	1.8	1.8
Per Capita GNP	4.2	5.0	4.7	7.3	7.0	8.2	7.5	3.9
Fixed Investment	14.8	25.7	10.2	17.9	7.8	11.1	7.7	9.9
Export of Commodities	28.0	38.5	17.1	33.8	22.7	32.7	16.0	12.0
Import of Commodities	8.7	18.7	6.5	25.8	13.7	12.8	12.0	10.8
Employment	4.7	3.2	3.3	3.8	2.9	4.5	3.2	2.3

Source: Economic Planning Board

In common with the rest of the so-called "Gang of Four" (Taiwan, Hong Kong, and Singapore), Korea shares the Sino-cultural, Confucian heritage. It has frequently been argued that the "right" values of Confucian ethics were instrumental in promoting Korea's development. The Confucian value system essentially governs nonreligious, ethical codes of social behavior. As such, certain of its virtues can be considered supportive of economic development. Among them would be: the intrinsic value placed on education as a vehicle for self-gratification; extolment of diligence and self-discipline; respect for social order, hierarchy, and authorities; and absence of religious or ideological dogmatism inhibiting the pragmatic pursuit of ends.

However, one must also note other aspects of the Confucian heritage that can be considered inimical to economic development. For instance, in the Confucian hierarchy businessmen and merchants typically occupy lower social classes in contrast to the high prestige accorded to government officials, scholars, and even farmers. The argument of cultural influence does not go hand in hand with the phenomenon of abrupt surge of the entrepreneurial class since the start of Korea's modernization efforts. The entrepreneurial class in Korea emerged as soon as the right incentives and sociopolitical environment for business were secured.

Another culture-related myth is that the East Asians have a hard-work ethic. It is true that the Koreans have in the past worked long hours. So would, however, Latin Americans or Africans under propitious conditions. The Koreans did so only because opportunities for a better livelihood were made available. It is worth pointing out that the same Koreans had often been the target of ridicule by the Western media for being an extremely indolent and uninspired work force in the 1950s when the economy was stagnant. The puzzling question is: Why with the start of the development process, have the negative factors in the cultural heritage suddenly withered away, with only the positive influences retained?

As regards the role of foreign aid in Korea's development, it must, first of all, be admitted that South Korea had received an inordinate amount of American aid, particularly during the 1950s—however, mostly in the form of food and basic consumer goods. The concessional aid rapidly diminished after the mid-1960s, being gradually replaced by loan capital. In the case of Korea, both positive and negative effects of foreign aid have been present. While part of the aid Korea received may have been spent on infrastructure building for subsequent industrial development, in other instances it had adverse impacts on the economy. For instance, American food aid in the 1950s turned out excessive in amount, thereby deterring any possibility of self-sustained development for indigenous agriculture. Thus, while the aid can be a great help, it can also become a hindrance unless put into a rational use. On the other hand, it could easily lead to a state of self-complacency, inaction, and dependency.

As regards the factors contributing to Korea's success, its experience, in particular from the perspective of comparing with Latin American countries, can be considered *sui generis* in the

following aspects. First of all, unlike Latin America, the society of Korea is culturally and ethically homogeneous, and relatively less structured. No strong social discriminations are discernible because of differences in religion and no deeply-rooted class structure exists. The social mobility of labor is relatively unrestricted, and the sociocultural environment can be viewed as largely conducive to economic development.

Secondly, a relatively well-educated labor force has been a key feature in Korea's transitional growth story. Inheriting from its cultural tradition in which education is socially valued, Korea's transition to a high-growth economy started with an already relatively well-developed educational system far in advance of that existing today in other developing countries. The nation has one of the highest literacy rates in the developing world,[57] although public expenditure on education has not been particularly high by international standards. Society's emphasis on human capital investment has yielded a high-quality skilled work force, to which can be attributed the sustained growth in labor productivity observed throughout the period of Korea's transition.

Another feature of the Korean experience that must be noted is a prolonged political stability, paradoxically brought about by the authoritarian regimes. Beginning with the military coup in 1961, Korea had strong and stable governments motivated and able to implement far-reaching economic policies. With the help of competent technocrats, the governments were able to formulate and effectively execute policy plans articulated for concrete action. When deemed necessary, they intervened in labor markets, countering organized labor and thwarting its effort to emerge as a political force, although wages were as a rule allowed to rise in response to labor market conditions. It was during the early 1960s that real wages were severely suppressed in order for Korea to gain a competitive edge in exports of its labor-intensive goods.

The final point to note is that Korea's earlier export success was achieved under rather unusual international circumstances. The two decades following the Bretton Woods system until the first global oil crisis in the early 1970s represented the "golden age" of international trade and investment. During this period, not only were supplies of international capital at reasonable borrowing terms relatively abundantly available, but also many industrialized countries could attain and sustain near full-employment growth, which further stimulated expansion of the world market. The world trade volume in manufacturing goods grew by more than 10% per year. The fruits of the expansion were also shared by the newly industrializing countries in East Asia, including Korea.

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57 There was an educational revolution primarily based on individual initiatives during the 1950s which paved the way for the industrial revolution, boosting the 30% literacy rate in 1953 to 80% ten years later. By 1970, the country's literacy rate was one of the highest in the world. For example, the median period of formal education of Korean youths (25-34 age group) was 6.76 years, which was slightly lower than that of Japan (7.84) but higher than that of France (5.01) and far above that of India (0.70). UNESCO: *Statistical Yearbook*, 1973.

Particularly worth noting is an historical event in the world that influenced the pace of Korea's industrialization. South Korea participated militarily in the Vietnam conflict during the late 1960s and the early 1970s, and provided war-related offshore supplies to the American troops. Korean participation in the war efforts immediately resulted in substantial foreign exchange earnings, which subsequently facilitated the rapid development of Korea's basic industries. In particular, steel, machinery, and other heavy manufacturing industries benefitted from offshore procurements.[58] The changed world economy environment today would, however, make any efforts of other developing countries to replicate the Korean-style, export-oriented development much more difficult.

B. Lessons from the Korean Model

These factors, more or less unique to the Korean situation, are not sufficient in themselves to explain Korea's success. In the final analysis, it was essentially a set of industrialization strategies carefully designed and effectively implemented that set the whole process of development in motion. A combination of historical and cultural circumstances conducive to development did already exist, and this only helped government policies to work.

There are a number of traits in Korea's development strategy that can serve as positive lessons for other industrializing countries, in particular for Latin American countries:

1. The Korean experience exemplifies the continual process of interaction between government and market. As pointed out by I.J. Whang, "the interaction took place not necessarily in the context of competition over resources but rather in the context of complementarity for economic development."[59] For instance, government intervention had been justified, whenever necessary, in order to enhance economic efficiency as a whole. The decisions to liberalize exchange rates and interest rates along with fiscal reforms in the initial phase of industrialization efforts were clearly aimed at establishing the conditions conducive to international competitiveness and to the encouragement of savings. Such tactics as selective credit allocation to support sectors of "potential winners" induced competition by creating the markets for their products and the conditions for high returns, further attracting the entry of new competitors. Thus, the international competitiveness of Korea's exports was the result as much of realistic exchange rates and market-based low wages as of government subsidies and policies.

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58 According to an estimate (Kim 1970, p. 28), Vietnam-war related revenue accrued to S. Korea for year 1967 alone reached as much as $185 million, accounting for about 4.0% of Korea's GDP in that year.

59 See Whang (1987), p. 86.

In this connection, it is worth noting that public enterprises were established mainly in infrastructure activities that required massive capital-intensive technologies or where the private sector would be unwilling to bear the risk. In some cases, the motive of public enterprises had been to cope with market failures involving entrepreneurial inadequacies or imperfect capital markets. Korean public enterprises were rarely involved for long in activities commercially competitive with the private sector.

2. The government's role continued in providing the directions of the economy by participating directly or indirectly in basic economic activities and by coordinating or guiding private sector activities. The longer term strategy, on the other hand, called for conscious industrial restructuring to create comparative advantage in high value-added industries with a growing market and potential scale-economies. The sectoral planning, designed in a manner consistent with other encompassing macroeconomic policies, took into consideration the dynamic sequencing of sectoral development that could be adapted to the shifting pattern of comparative advantage. This flexibility and adaptability to changing circumstances have been a major strength in Korea's industrial policy.

The earlier policy of promoting the targeted industries with subsidized loans encouraged a capital-intensive production process, resulting in factor-market and other structural distortions in the economy, which eventually needed to be corrected in subsequent planning. It nevertheless led to the creation of a new pattern of comparative advantage in industrial structure. The important point to note is that it was not the factor endowment conditions that influenced the evolution of Korea's industrial development. Rather it was a set of articulate, conscious policy measures that contributed to a dynamic sequencing in industrial development for comparative advantage. The lesson still remains that as the economy becomes large and diversified, there should be a gradually reduced role of the government and an increased liberalization of the economy.

3. There are a few important lessons to learn from Korea's experience with outward-looking orientation. First of all, in the case of Korea export promotion was preceded by import substitution in the 1950s which provided the industrial infrastructural base for the expansion of exports. It was during this period that many exportable industries of the 1960s, especially the shoes and textile industries, rapidly matured. The Korean experience thus tells us that success in industrial exports cannot come overnight through some quick-fix, magic formula. Moreover, even during the period of export expansion, the development of internal market-oriented industry that could complement export industry was not overlooked. The Korean model is an eclectic one that while emphasizing an outward-looking policy, considered the protection of selective import-substituting no less important. The coherent set of policies aimed at integrating producing sectors, in particular, by means of the strengthened production of intermediate and capital goods, led to the establishment of a viable industrial structure that has proved adaptable to the shifting

comparative advantages in international markets. Vertically integrating the production structure has also lessened the economy's dependence on imports. In this context, Korea's outward orientation must not be interpreted as liberalization of trade in the sense of neoclassical economics. Even in the recent period, Korea's pace of import liberalization has been extremely cautious and gradual. Perhaps one important lesson learnt from Korea's experience with outward-oriented strategy would be that such a strategy provides an effective instrument to gauge performance of the domestic sectors of the economy, thereby forcing them towards increased efficiency and technological progress. Furthermore, by promoting competition, it rewards efficient entrepreneurs to the detriment of "rent seekers."

4. The Korean experience shows the importance of concrete but flexible planning and management of action policies. The distinctive virtues of Korean management were the pragmatism and flexibility of its policies as well as effectiveness in implementation. Detachment of the policymakers from straightjacket economic ideologies and dogmas and their willingness to experiment on what would work best at a given time and place seem to have been the key to Korea's success. There were really no traditional text book models that could be used to adequately describe the Korean experience. A distinctive trait of the Korean model lies in the ability of policymakers to quickly and flexibly manipulate both positive and negative external factors to promote their own goals, formulate plans to realize their goals, and effectively implement these plans under an efficiently functioning bureaucratic system. Typically, once a development project was approved, government support was continuous and consistent from the beginning until its eventual withdrawal. There were constant evaluations of industrial performance and industrial dynamics, which would eventually be built into the process of government mobilization of support and assistance.

5. The Korean model is not that of industrialization only at the expense of all other areas. For instance, despite the priority accorded to industrial development, the agricultural sector has not been totally ignored. In fact, there were periods, in particular, during the earlier part of the 1970s when agriculture came to the fore of development strategy. By and large, the goal of governmental policies has been avoidance of an excessive urban-rural disparity in income. The fairly equitable pattern of income distribution that emerged from the earlier success in land reform obviated much of the policymakers' concern with distributional issues in implementing rapid-growth strategies. The Korean government did not have to spend a large amount of its budget for social welfare and could concentrate its limited resources on high-growth sectors of the economy.

6. Perhaps the most tangible lesson that the Korean experience tells us is the importance of human capital investment. Koreans, in common with other East Asian NICs, have shown an awesome commitment to investment in human capital both by way of the quantity and the quality of education. The unusual educational zeal is partly cultural, but also reflects the result

of government measures to increase the efficiency of public education. Related to the issue of human capital is efficient management at the firm level as well as the high quality of the labor force; both have been fundamental strengths of Korea's industrialization process. The Korean manufacturing sector has been characterized by efficient factor use and high rates of capacity use. For instance, although such capital-intensive industries as steel, petrochemicals, shipbuilding, and machinery have recently expanded quite rapidly, the average capital-output ratio for the manufacturing sector has continued to remain very low by international standards.[60] On the other hand, labor productivity grew at an average rate of about 7% per year during the 1966-76 period. These gains were accompanied by small increases in the average capital employed per worker, reflecting large improvements in productivity in the existing industries.

[60] For instance, the gross incremental capital-output ratio was estimated at around 2.4 (Westphal and Kim 1977, p. 5-11).

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TABLE-2-2

Principal Economic Indicators

Items	Remarks	Unit	1962	1965	1970	1975	1980	1981
GNP		Millions of 1975 U.S. dollars	1,362	1,428	2,009	2,023	2,098	2,115
	Growth rate	%	2.2	5.8	7.6	7.1	-6.2	6.4
	Per capita GNP	U.S. dollar	87	105	243	574	1,481	1,607
Indices of Industrial Products	Total index	1975 = 100	10.5	13.7	37.4	100.0	209.8	231.7
	Mining	1975 = 100	44.8	59.1	71.3	100.0	111.2	119.1
	Manufacturing	1975 = 100	9.2	11.9	35.3	100.0	215.9	238.8
	Electricity	1975 = 100	9.9	16.4	46.2	100.0	187.7	202.7
Foreign Trade	Exports (FOB)	Million dollars	54.8	175.1	835.2	5,081.0	17,504.9	21,253.8
	Imports (CIF)	Million dollars	421.8	463.4	1,984.0	7,274.4	22,291.7	26,131.4
Price index	Wholesale	1975= 100	16.1	28.8	42.0	100.0	225.2	275.8
Foreign exchange holdings		Million dollars	168.6	146.3	609.7	1,550.2	6,571.4	6,891.0
Unemployment	Rates	%	-	7.4	4.5	4.1	5.2	4.5
Population	Mid-year	1000 persons	26,513	28,705	32,241	35,281	38,124	38,723
	Growth rate	%	2.90	2.57	2.21	1.70	1.57	1.57

Source: The Bank of Korea