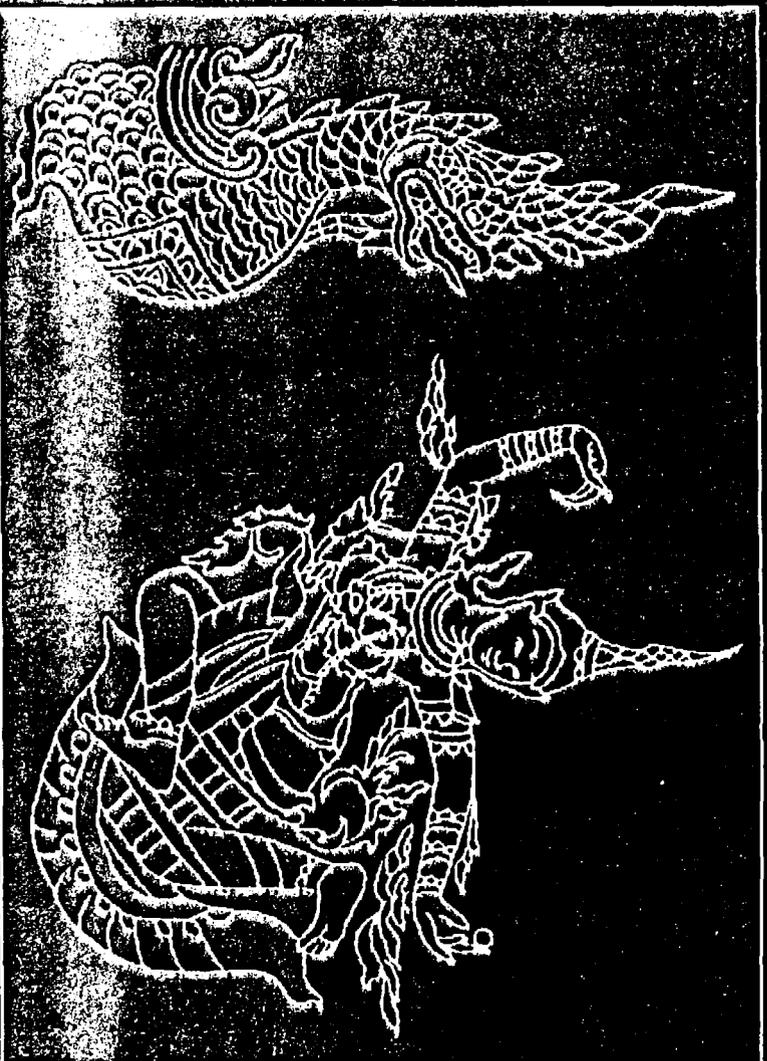


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THE LESSONS OF EAST ASIA

KOREA

A Case of Government-Led Development



Kitwan Kim
Danny M. Leipziger

A World Bank Publication

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FOREWORD

Policymakers everywhere are searching for lessons from East Asia's enormous success in economic development. A number of recent cross-country and thematic studies have sought to identify and analyze the policies behind this success. Among them is *The East Asian Miracle*, a recent World Bank publication, which draws in part on the Lessons of East Asia project. Study teams, including in-country nationals, examined in some depth the experiences of the highly successful East Asian economies and the public policies underpinning them.

Several clear contributions emerge from this set of country studies. The research:

- Highlights considerable variation in approaches within the group of East Asian economies. For example, some economies chose a substantial degree of government intervention; others did not. The studies dispel the notion that there is a single or uniform East Asian model of success.
- Demonstrates that a core set of good economic policies -- such as macroeconomic discipline, outward orientation, and human resource development -- laid the foundation for East Asia's success. Pragmatic policymaking -- understood as being nonideological and reversible -- seems to be at the heart of these policies and merits replication.
- Dispels some of the myths about the more idiosyncratic interventions, such as "picking winners" in industry, which sometimes produced the desired result and sometimes did not. Because presence or absence of institutional features seems to have affected the outcomes of these interventions, applications to other regional contexts must be approached cautiously. A dominant finding of the studies is that serious diversions from macroeconomic equilibrium were largely avoided, even by strong interventionists. At the same time, the later generation of industrializers were more successful when they avoided these industrial policies.

A question not easily answered is why East Asian governments adopted fundamentally sound policies and were apparently able to achieve better results from their active policies and to incur lower costs from errors. In this connection, the studies touch on such dimensions of policymaking as the role of the state, leadership, and the bureaucracy. It is one thing to describe the institutional features accompanying a successful episode, however, and quite another to know why and how those features came about. For instance, why did East Asian leaders apparently hold themselves more accountable for economic performance than has been the experience elsewhere? How did the governments manage to gain sufficient national consensus to put difficult policies into effect? These aspects of political economy cannot be ignored. Our analytic tools, however, are severely limited in penetrating these issues, in assessing their impacts, and in assigning credit to them. These country studies are only one step, although a significant one, in deepening our understanding of the experience of East Asia. It is hoped that they will prompt additional work on the institutional foundations of rapid growth.

Gautam Kaji
Vice President
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The country studies team included Amar Bhattacharya, Chuen Chau, Scott Christensen, Carl Dahlman, David Dollar, Kim Kihwan, Saha Dhevan Meyanathan, Mari Pangestu, Peter Petri, Ismael Salleh, Ousa Sananikone, Ammar Siamwalla, Teck-Wong Soon, C. Suan Tan, and Vinod Thomas. The country authors would like to acknowledge fruitful dialogue with our country counterparts and the analytic work prepared in World Bank country departments as part of Bank economic and sector work. The country studies were edited by Rupert Pennant-Rea. The project assistant was Jason Brown. This project was undertaken with the support of Lawrence H. Summers, Nancy Birdsall, John Page, and Gautam Kaji, Callisto Madavo, Marianne Haug, and Vinod Thomas.

Danny M. Leipziger
Country Studies Director

ACRONYMS

DPM	-	Deputy Prime Minister
EPB	-	Economic Planning Board
FDI	-	Foreign direct investment
FYR	-	Five Year Plan
GDI	-	Gross Domestic Investment
GDP	-	Gross Domestic Product
GIE	-	Government-invested enterprises
GTC	-	General Trading Company
HCI	-	Heavy and Chemical Industries
HIID	-	Harvard Institute for International Development
KDI	-	Korean Development Institute
KEPCO	-	Korea Electric Power Corporation
KIET	-	Korea Institute of Economics & Technology
KIST	-	Korea Institute of Science & Technology
KNR	-	Korean National Railway
KOTRA	-	Korean Trade Promotion Corporation
KTA	-	Korean Traders Association
MOF	-	Ministry of Finance
NIF	-	National Investment Fund
ODA	-	Official Development Assistance
POSCO	-	Pohang Steel Company
REER	-	Real effective exchange rate
VAT	-	Value-added tax
WDR	-	<i>World Development Report</i>

EXECUTIVE SUMMARY

Development Strategy and Macroeconomic Performance

Despite unfavorable initial conditions, the Republic of Korea's real GNP has tripled in every decade since 1962. The economy has undergone a rapid structural transformation and is now dominated by a dynamic and flexible manufacturing sector. The benefits of growth have been distributed widely. There has been a sharp reduction in the incidence of absolute poverty and significant improvements across a broad range of social indicators. This was only possible in an environment in which the state saw economic development as its primary responsibility.

Economic policy has been characterized by a strong outward orientation, as reflected in the rapid and sustained growth of manufactured exports. Export promotion was the prime motivator of an activist industrial policy and international prices were used to assess the success of sectoral interventions. Apart from its sectoral interventions, the state has promoted growth by maintaining a stable macroeconomic environment, by fostering the creation of general trading companies, and by investing in infrastructure and human capital formation.

Macroeconomic policy has been pragmatic and flexible; although there was a strong emphasis on growth and industrial development in the 1960s and 1970s, the government imposed a comprehensive stabilization program following the second oil shock. There has been a notable continuity in policy areas central to the export-led strategy; including attempts to restrict fluctuations in the real effective exchange rate, contain the fiscal deficit and prevent increases in unit wage costs.

The state has created its own enterprises where it has identified critical economic needs that have not been met by private investment. Many SOEs were established in the late 1960s, when the private sector was unwilling to accept the risks involved in industrial upgrading. During 1963-72, the growth of SOE output exceeded increases in GDP. For the most part, SOEs have been well managed and have recorded strong economic performance. POSCO, the state-owned iron and steel company, is reputed to be the world's most efficient steel producer.

Public investment in infrastructure accounted for more than one third of gross domestic investment in the 1960s and 1970s. The government has favored large-scale projects, many of which have earned impressive returns as the continuing expansion of the economy has outperformed plan targets. Engineers have played an important and successful role in infrastructure planning; among a sample of developed and developing nations, the net productivity of Korea's capital was exceeded only in Taiwan, China. Korea has a similarly impressive record in human capital formation. Enrollment rates in secondary and tertiary education are higher than in many developed nations. Combined public and private expenditure on education accounts for 10 percent of GDP, significantly higher than the East Asian average.

Korea's industrial policy can be divided into three stages. In the period 1961-73, the state combined the aggressive promotion of exports with classic protection of the domestic market. The net effect was to create incentives that favored trade but did not influence the composition of exports. Labor-intensive manufactures dominated export sales - aided by a competitive labor market which reduced labor costs - suggesting a trade pattern that was in accordance with comparative advantage. In 1973, Korea launched an attempt at industrial diversification and upgrading, through the Heavy and Chemical Industry (HCI) drive. Six strategic industries were identified and supported through a combination of tax incentives, subsidized credit and import protection. Domestic producers were encouraged to license foreign technologies. The HCI policy represented a significant shift in favor of sectoral targeting; the government was committed to allocating resources to HCI and there was a sharp reduction in the volume of credit available to light industries.

Beginning in 1979, there was a sharp reversal in policy. As the economy stalled, deficits increased and excess capacity appeared in HCI, the government withdrew from selective intervention in

strategic sectors. Policy favored functional incentives, which did not distinguish between sectors, and credit was reserved for small- and medium-sized enterprises. The government also led the restructuring of distressed industries and was active in planning mergers and arranging for financial rescheduling.

Assessments of the HCI drive are controversial. Importantly, the objective was to develop industries that could compete successfully on international markets. The requirements placed on infant industries distinguish Korean intervention from policies adopted elsewhere. Rapid increases in capital-intensive exports suggest that the HCI drive had achieved its goal by the mid-1980s. Nevertheless, there were significant costs associated with the policy. The excess capacity and low returns experienced in the 1980s indicate that the state over-invested in HCI. Established exporters were crowded out of formal credit markets; creating a bias against those sectors which already enjoyed a comparative advantage and preventing Korea from replicating Taiwan, China's smooth structural transformation. Many of these distortions have proved short-lived and can be justified by the dynamic gains associated with the rapid creation of competitive heavy industries. However, the financial sector, which bore many of the costs of supporting HCI development, remains severely weakened. The high proportion of poorly performing policy loans, interest rate controls and state pressure to write-down the debts of favored enterprises have compromised the financial stability and independence of Korea's banks.

Institutions and Governance

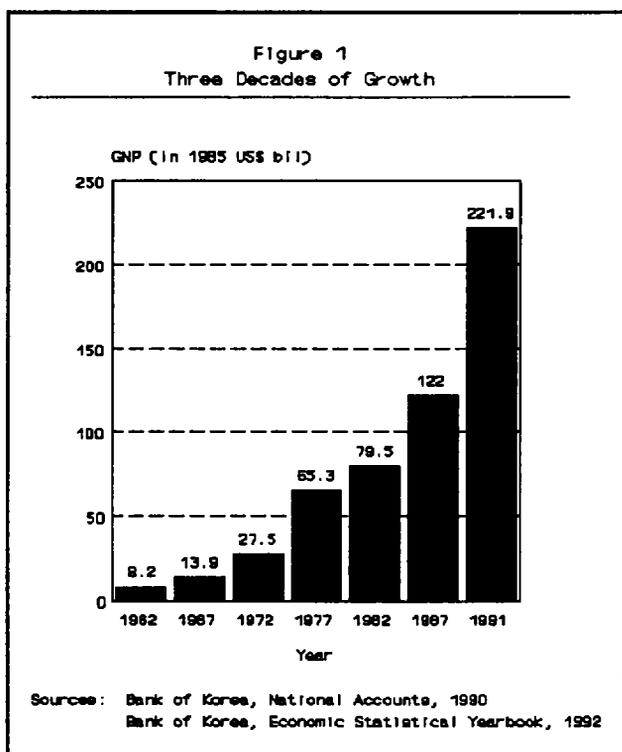
Korea's development was planned and implemented by a state apparatus that remained committed to sustaining rapid growth. Successive Presidents have played an important role in determining the nature of development strategy. The Economic Planning Board (EPB) has been the most influential state agency. It designed, coordinated and evaluated development policy under the direction of the Deputy Prime Minister. Other important organizations have been established to oversee specific areas of policy concern, including the Office of National Tax Administration and the Ministry of Science and Technology. Ministries were supported by technical research institutes, such as the Korean Development Institute. After it was restructured in 1963, the civil service has developed into a professional and meritocratic institution. Appointment is based on an open competitive exam and promotion depends on performance evaluation. Most senior officials joined through a fast-track system which involves a rigorous selection procedure. Consequently, they enjoy high social status and their achievements are recognized publicly.

The bureaucracy developed a close relationship with the private sector, both to channel policies and to monitor performance. Senior businessmen and financiers were present, along with the President, at the monthly economic briefings of the EPB. Employer organizations, such as the Korean Traders Association, internalized policy objectives. In return for their support of economic policy, the state shared the risks of private enterprise, both through its control of the financial system and by underwriting foreign loans. The most successful companies were rewarded with preferential access to credit. The state used this strategy to encourage the formation of large trading conglomerates (the chaebol), through which it planned to compete in global markets.

Korean institutions are models for developing nations, whether they be research bodies, tax authorities or state enterprises. Planning and implementation are Korean strengths. They were particularly effective when combined with political stability and social consensus. The latter was due to an early concern with equity and continuing attempts to distribute the gains from rapid growth. Public policy was at the center of these decisions.

I. ECONOMIC PERFORMANCE

The Korean success story begins with a war-torn economy that had just lost two-thirds of its industrial capacity and 1.5 million lives in the Korean War. With a poor natural resource base and one of the world's highest population densities, Korea bore a strong resemblance to Japan. Armed with a literate and hard-working workforce, a sense of common purpose, and fierce nationalism which had kept the country independent and united for 12 centuries, Korea managed (in the terminology of Cho (1991)) to "condense" a century of growth into three decades. Unlike Japan, Korea did not have a large enough domestic market to contemplate anything other than export-driven development.



After a number of false starts in the 1950s, when Korea was almost totally dependent on U.S. foreign assistance, early attempts at "development" began, first in the form of reconstruction, indeed led by the Ministry of Reconstruction.¹ The coming to power of President Park Chung Hee with his strategy of "suchul ipguk" or "nation building through exports," heralded the beginning of Korea's modern development. In broad terms, Korea's real GNP has tripled every decade since 1962. (see Figure 1). When combined with a rapid slowdown in population growth,² this produced significant per capita income gains (see Figure 2). In 1962, per capita GNP in the United States, in real purchasing power terms, was 11 times greater than Korea's; by 1988, it was only 3.3 times greater. Korea also caught up significantly with Japan (see Figure 3), and outpaced its East Asian neighbors (see Figure 4).

How was this achieved? According to Cho (1991) the Korean economic system in the 1960s and 1970s was a variant of authoritarian capitalism, in which the enterprises were privately owned but the management was shared between the government and the owners. We concur with this assessment and see Korea's development history in its formative years as a government designed and managed effort, with the willing participation and execution of the private sector. What distinguishes Korean development from other efforts, however, was its devotion to exports and therefore its total acceptance of international prices as the yardstick of

¹ For a description of these early years, see Chung (1986) and Song (1990).

² According to Song (1990), the government systematically implemented population control plans at the national level very much like military campaigns. It also monitored the use of contraceptives and other family planning measures with almost the same attention it devoted to the export promotion.

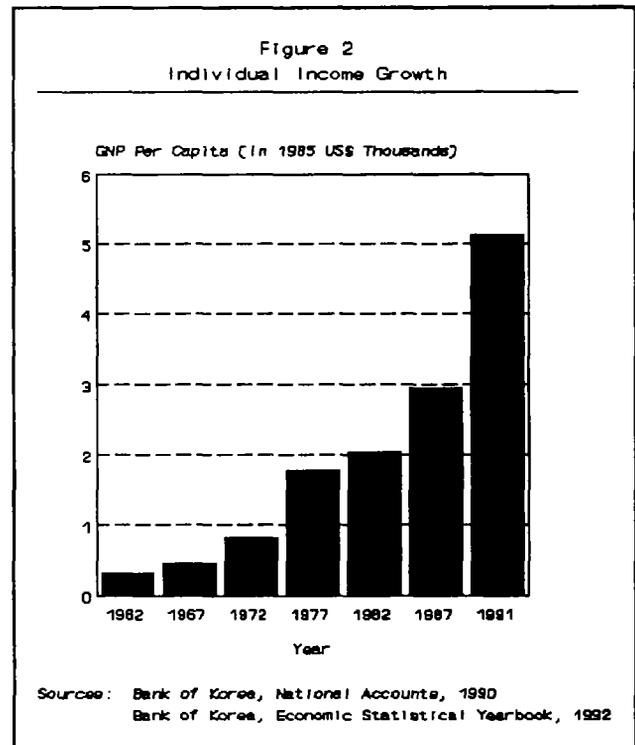
industrial performance. (For historical and other reasons, the same cannot be said for agriculture.) As a consequence of these efforts, Korea is one of the few nations which has transformed itself into a global trader (now ranked 11th in world trade) much the same as Japan. Indeed, comparisons to Japan a decade or two earlier raise the question of the "Japanese model," and the role of government, issues we deal with in this paper.

Export Dominance

The dominant feature of the Korean economy has been its export orientation. Exports, as a proportion of GNP rose from 7.4 percent in 1967 to 27.2 percent in 1977 and 36.7 percent in 1987 (see Figure 5). The country's share of world trade rose from negligible proportions in 1962 to 2 percent in 1990. There is persuasive evidence from the work of Balassa, Krueger, and the World Development Report 1991 that outward oriented countries have grown faster than those favoring production for domestic markets.³

Indeed the benefits of outward orientation are greater than what might be reasonably attributed to the achievement of allocative efficiency alone.⁴ The Korean preoccupation with exporting is seen as the prime motivator of government policy.

The elements of the support system for exports have been described by Rhee et. al. (1984) and others. They include the setting and monitoring of export targets, allocation of credit for export purposes, maintenance of an export-friendly tax and trade regime (see World Bank, 1987), effective policies for technology acquisition (see Westphal et. al., 1981), and strong international marketing efforts. One big influence has been the Korean Trade Promotion Corporation (KOTRA), which was established in 1962 as the export drive began. (It is a Korean characteristic to establish an institution to help implement major policy changes. Korea's technological drive, for example, began with the establishment of the Korean Institute for Science and Technology in 1961). The interesting fact about KOTRA is that it was not government-financed. It was supported by exporters themselves, although it was clearly an instrument to achieve government objectives. Similarly, the Korean Traders Association (KTA) was



³ See Dollar (1991) for a recent confirmation that openness is clearly associated with superior economic performance.

⁴ Krueger (1985) and others argue that open economies are more flexible than import-substituting economies because they have greater "cushions" of unessential imports to squeeze under adverse circumstances. According to Westphal, Kim and Dahlman (1984) and others, openness can also facilitate the absorption and mastery of foreign technologies. Nizhimizu and Robinson (1983) have shown that the rate of technical progress was faster in countries with outward oriented policies than in those pursuing an import substituting strategy.

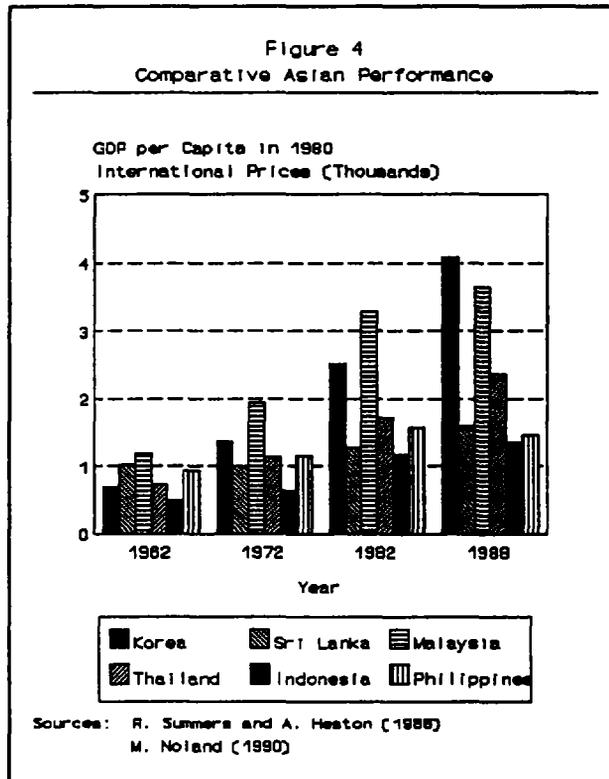
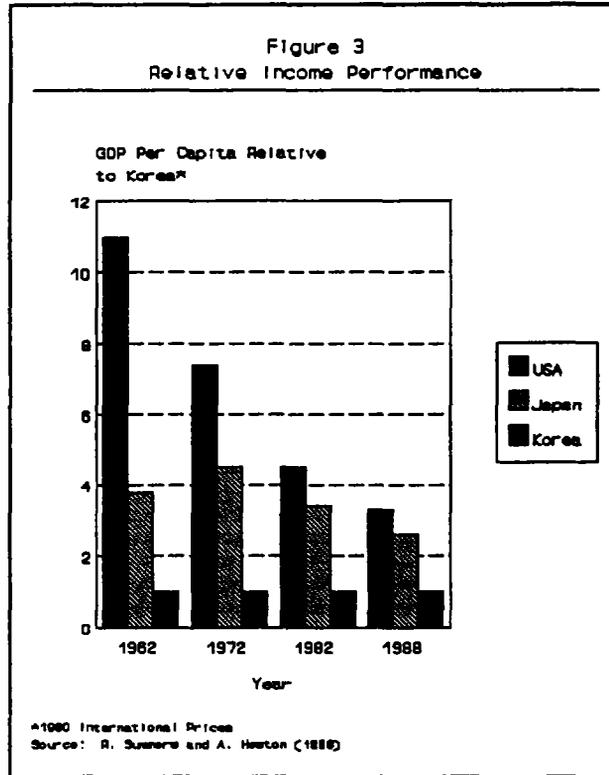
influential in promoting contact between government and business. The KTA's Special Fund for Export Promotion (begun in 1969) was funded by mandatory contributions levied as 1 percent of most imports.

Firms and industrial associations clearly internalized government objectives. They were expected to perform in exchange for the benefits provided in the form of infrastructure, credit and other policies described as the government's "modestly pro-export bias" by Westphal (1978). The yardstick of performance was exports, not profitability. This helps to explain the high leveraging behavior of firms and the growth-at-all-costs strategy of firms. Since the government favored economies of scale in production, marketing, and technology acquisition, it rewarded size with better access to credit.⁵ It also used social pressures and practical penalties to ensure compliance. Since it controlled industrial entry and rationed credit, the task of enforcement was rather easy. As in Japan in earlier periods, a few General Trading Companies were sanctioned (licensed) and allowed preferential access to foreign exchange. These GTCs controlled the majority of exports, and through them the government had easy control over industry.

Korea's manufacturing is unusually dependent on imports (see Chenery, Robinson and Syrquin 1986). This helps explain both the efficiency of production and the desire of Korean policymakers to change the structure of the economy. The model they followed was Japan.

Changing Industrial Structure

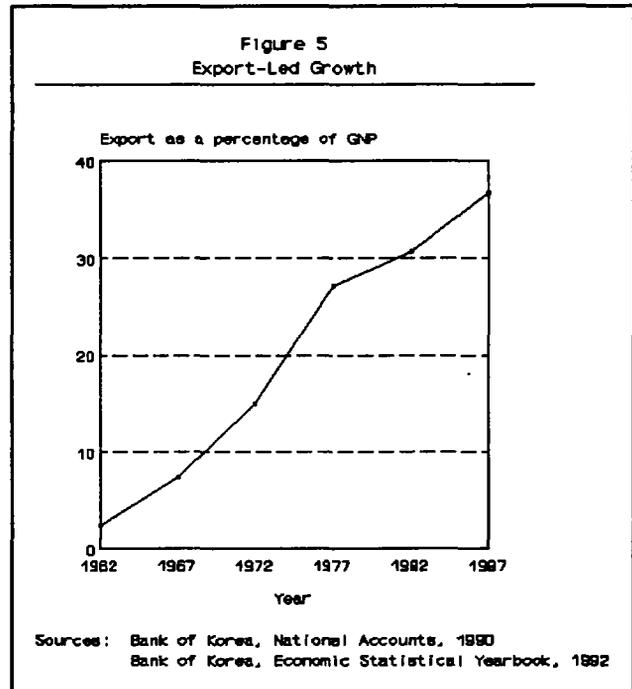
The overriding characteristic of Korea's economy is not only its rapid shift from agriculture (37 percent of GDP in 1962 to 8 percent in 1991) to manufacturing (see Figure 6); just as striking were the dynamism and flexibility of manufacturing itself. This can be seen at the firm level in the story of the Handok Company (see Box A), in the rapid transformation of Korea's leading exports (see Table 1), and in changes in its output structure (see Annex 1



⁵ See Leipziger (1988) on size, leveraging and profitability of Korean firms.

Table). The Handok story is mirrored in the pattern of exports which shifted from the most basic raw materials (primarily minerals) in 1961 to labor-intensive exports in 1970, an increasing emergence of capital-intensive exports in the 1980s, and technology-intensive exports by 1989. This pattern did not just happen; it was the result of careful planning and execution.

It is instructive to see the strong correlation between Korea's output structure in manufactures in 1983 vis-a-vis Japan's in 1965, and between Korea's "projected structure" for the year 2000 and Japan's composition in 1983 (see Table 2). The strategy document for 2000 was prepared by the Korea Institute for Economics and Technology, the think-tank affiliated with the Ministry of Trade and Industry. This industrial blueprint is only indicative, but serves a "signal" function to the now privatized but not independent banking system, as "guidance" for industry in that industrialists are expected to take general investment and marketing cues from these strategic objectives, and as a "coordinating" instrument for government through its educational, R & D, and technology policies.



Box A: Korea's Industrial Flexibility at the Firm Level

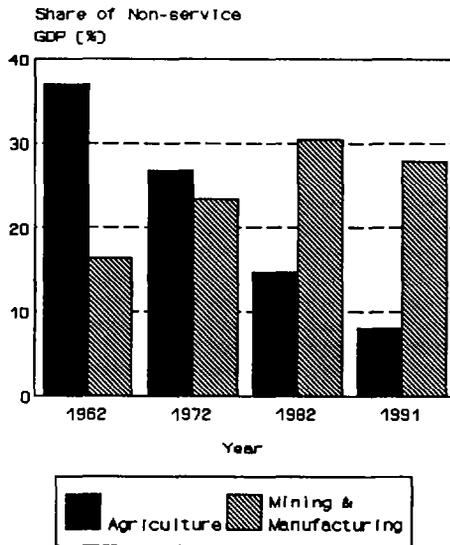
In 1971 the Handok Company was a wig manufacturer, with wigs accounting for 95 percent of sales. By 1976, Handok had diversified extensively, to the point where wigs were only 16 percent of sales. Paper products made up 51 percent of output, complemented by tuna (22 percent) and watches (9 percent). The industrial transformation was completed by 1981, when watches accounted for 85 percent of sales. By 1985, liquid crystal display manufacturing, including monitors and dashboard items, were beginning to emerge as new sales items (10 percent of sales) and the bulk of revenue came from computers and electronics (41 percent) and watches (45 percent). Handok is an example of industrial flexibility in a medium-sized firm employing about 3,500 people and generating sales of about 64 billion won in 1984.

Table 1
Industrial Flexibility - The Top Five Exports

1961		1970		1980		1985		1989	
Export Item	Share (%)	Export Item	Share (%)	Export Item	Share (%)	Export Item	Share (%)	Export Item	Share (%)
Iron Ore	13.0	Textiles & Garments	40.8	Textiles & Garments	28.6	Textiles & Garments	23.1	Electronic Products	29.4
Tungsten	12.6	Plywood	11.0	Electronic Products	11.4	Ships	16.6	Textiles & Garments	24.3
Raw Milk	6.7	Wigs	10.8	Steel Products	10.6	Electronic Products	14.1	Steel Products	6.9
Anthracite	5.8	Iron Ore	5.9	Footwear	5.2	Steel Products	8.5	Footwear	5.8
Squid	5.5	Electronic Products	3.5	Ships	3.5	Footwear	5.2	Automobile	3.8

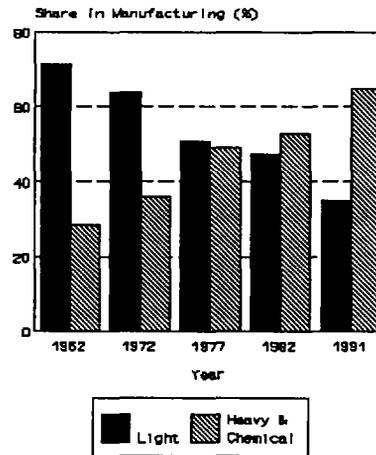
Source: Korea Foreign Trade Association

Figure 6
Changing Industrial Structure



Sources: Bank of Korea, National Accounts, 1990
Bank of Korea, Economic Statistical Yearbook, 1992

Figure 7
Heavy and Chemical Industry Push



Sources: Bank of Korea, National Accounts, 1990
Bank of Korea, Economic Statistical Yearbook, 1992

One example of the effectiveness of policy was the rapid development of heavy and chemical industries (HCI) in the 1970s (see Figure 7). The costs associated with this forced restructuring of industry are discussed later, but it is worth noting that the percentage of production exported by these infant HCI industries tripled between 1973 and 1983, to almost 23 percent. Herein lies the major distinction between Korean industrial policy interventions and similar efforts in other would-be industrializers, namely, that the ultimate goal from the start was international competitiveness (the classic infant-industry case).

Economic Welfare

Korea has not just had rapid economic growth; it has also shared the benefits of that growth. The basis for rural equity was laid with the post-occupation land reform of confiscated land. This was followed by the 1954 Land Reform in which land was appropriated in exchange for 5 year bonds (whose value largely eroded through inflation) and redistributed in small units. As important, however, is the lesser known fact that between 1962 and 1976, 25 percent of public investment was destined for agriculture, forestry and fisheries (Sakong, 1992). Some of these investments were part of the so-called saemaul or "new village" movement to spur rural development. Song (1990) lists land reform, the asset destruction of the Korean war, and education as the major factors working for an equitable distribution of rural income. Leipziger and Petri (1988) add to this the clear system of agricultural price supports which aimed to minimize urban-rural income differentials. Except for the early 1970s, the average income differential between urban and rural households never exceeded 15 percent and usually was within a few percentage points.

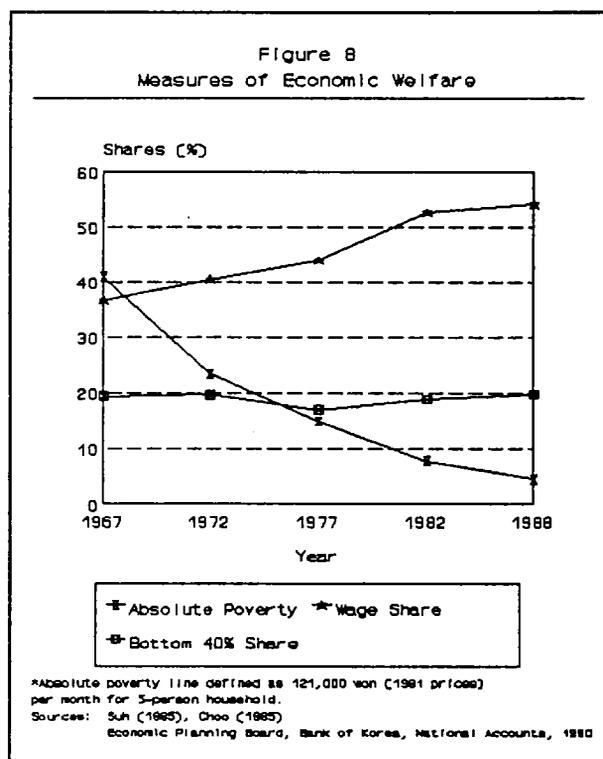
Whether measured by the decile distribution ratio reported by Song (1990) or the Gini coefficients reported by Choo and Yoon (1984) and Kim and Ahn (1987), Korea's income distribution changed remarkably little during the high growth years of 1965-85. Absolute poverty, as measured by Suh (1985), declined steeply, from 41 percent in 1965 to less than 10 percent in 1980. Figure 8 shows trends in absolute poverty, the share of the bottom four deciles of the income distribution, and the wage share in national income. Although Leipziger and associates (1992) argue that recent shifts in the value of assets have had an adverse impact on income distribution, especially because of under-reporting of capital gains by the wealthiest decile, there is no doubt that Korea has contradicted the Kuznets hypothesis with broadly distributed income gains.

Welfare as measured by purchasing power relative to consumer goods has increased by a factor of 3.2 between 1974 and 1989. Purchasing power relative to land and housing prices, however, has remained essentially unchanged. Even so, the average Korean is clearly better off with each passing decade. This trend is apparent from any number of social indicators. The one surprising statistic is the

	Output			
	Korea		Japan	
	1983	2000	1965	1983
Machinery	10.4	12.1	12.2	14.3
Electronics	8.2	15.4	9.5	18.0
Automobile	3.6	8.6	2.7	6.3
Shipbuilding	4.3	3.3	3.3	2.6
Petrochemical	3.2	2.6	}	}
Industrial chemicals	3.4	4.6	}4.6	}3.1
Petroleum refining	9.9	3.8	}	}
Iron and steel	7.6	6.2	3.3	2.7
Textiles (excl. garments)	13.9	8.3	17.3	10.2
Food	10.9	7.0	6.7	4.3
Other manufacturing	24.6	28.1	40.4	38.5
Total Manufacturing	100.0	100.0	100.0	100.0
Source: KIET: <i>Projections of Manufacturing Structure and Development Strategy Toward 2000, 1985</i>				

amount of leisure time reported (see Song, p. 182): it was unchanged between 1970 and 1985, at 116 hours per week. A corollary is that Korea's average manufacturing workweek of 54.7 hours in 1984 was 10 percent higher than Taiwan China's, 31 percent above Japan's or Germany's, and 34 percent above that of the U.S. It is not apocryphal that Korean subordinates do not leave the workplace until their manager has departed.

However, Korea is no longer a society of repressed consumption. With car ownership growing exponentially, demographics favoring consumption, and capital controls being gradually lifted, savings may well have peaked, and the Government's role as a savings mobilizer may be reduced over time. Although Koreans still lag behind in certain welfare indicators, particularly housing, three decades of rapid growth have produced unparalleled welfare gains.



Characteristics of the Economy

Chenery-Syrquin Norms

One of the early attempts to analyze changes in economic structure for developing changes was the "norms" approach of Chenery and Syrquin (1975), later extended by them (1989). The methodology is to explain the general evolution of structural variables as a function of income and population variables as well as net imports of goods and services. Deviations from the norm indicate unusual performance. Korea exceeded the norm for most key indicators as early as the mid-1960s (see Table 3). It was not alone in beating the norms. Using the ratio of manufactured exports to GDP, for example, in which Korea reached the norm in 1966, Taiwan China reached it in 1965, Malaysia and Thailand in 1978 and Indonesia in 1984, shows a clear pattern for first and then second generation industrializers.

Several recent studies have sought to explain East Asia's success (see WDR 1991 for a general review) and most have singled out macro management, in particular exchange rate policy.⁶ Though clearly crucial as a proximate policy variable, what enabled Korea to respond to a competitive exchange rate was its early infrastructure investments, its heavy spending on education, strong savings, and its energetic workforce. Thus, when the sources of Korea's growth are examined in a Denison framework, as was done by Kim and Park (1985), the major contributors were (in order of importance) labor, capital, economies of scale and knowledge. During 1963-82, labor's contribution was relatively constant, but capital's contribution doubled in the second half of that period, when it added an average of 2.1 percentage points to growth annually. Advances in knowledge, measured as Total Factor Productivity, averaged 1.1 percent during 1963-82 compared with almost 2 percent in Japan during 1953-

⁶ See Krueger (1978, 1985).

71 (Denison, 1979).⁷ As for labor, it contributed greatly to Korea's growth: as sources of growth in employment levels and hours worked were twice as great as they were in Japan for the period cited by Denison. The contribution of education was equally relevant for Korea as it had been for Japan a decade earlier and in the U.S. during 1948-73.

Table 3 Chenery-Syrquin Norms		
Variables to GDP	Year C-S Norm was Reached	Average Annual Deviation*(%)
Gross Investment	1966	23
Manufactured Exports	1966	58
Manufactures	1967	19
Infrastructure	1966	13
Utility Production	1966	---
Merchandise Exports	1971	74
* average annual deviation between C-S Norms Year and 1989. Source: World Bank		

Human Capital

Even in 1960, Korea's level of educational attainment was high compared to most other developing countries (see Barro and Lee, 1992). Between then and 1982, however, it showed exponential growth in secondary education. Enrollments rose from 27 percent to 82 percent of the relevant age-cohort. As for tertiary education, the enrollment ratio rose from 11 percent in 1977 to 36 percent in 1987 (see Tables 4 and 5).

According to Tan and Mingat (1989), who surveyed education spending in Asia, Korea's mid-1980s average of 3.4 percent of GNP spent on public education was in line with the regional average, as it had been in previous decades.⁸ What differentiated Korea from other Asian economies (except for the Philippines) was the amount of private spending on education: 2.5 times more than the

⁷ Measured as output per unit of input, Korea (1963-82) added 3.24 in output per 1.0 unit of input, below Japan's (1953-71) performance but roughly equivalent to France, Germany and Italy in the 1950-62 period. Denison (1979).

⁸ An interesting finding by Tan and Mingat (1989) is that the Gini coefficient for access to public education is lowest (most equal) in Korea among Asian countries.

Asian average, according to Tan and Mingat's index of private financing in higher education. According to data collected by the Korean Education Development Institute, when private spending on education is included, the country's total was 10 percent of GNP in 1990.

	Average Schooling Years*			
	1960	1970	1980	1988
Korea	0.81	1.67	2.75	2.86
Philippines	1.18	1.67	2.39	2.68
Indonesia	0.12	0.34	0.62	0.73
Malaysia	0.61	1.05	1.49	1.79
Taiwan China	1.03	1.33	1.96	
All Developing	0.34	0.52	0.95	1.1
OECD	2.59	3.03	3.79	3.94

* Defined as the average number of years of secondary schooling attained by the total population.
Source: Barro and Lee (1992).

	Average Schooling Years*			
	1960	1970	1980	1985
Korea	0.1	0.23	0.36	0.41
Philippines	0.25	0.38	0.61	0.71
Indonesia				
Malaysia	0.06	0.06	0.06	0.08
Taiwan China	0.17	0.21	0.37	
All Developing	0.04	0.07	0.13	0.18
OECD	0.28	0.41	0.60	0.70

* Similar definition for tertiary education.
Source: Barro and Lee (1992).

All anecdotal evidence confirms that Korean families place the highest premium on education. Korea is a country where government, in the name of equity, once tried to ban private tutoring, where research institutes regularly count up the number of their doctoral level staff, and where (merit-based) entrance to Seoul National University is a prized family accomplishment. Indeed, surveys by the Bank of Korea routinely report that education and housing are the two main motivations for savings.

Infrastructure and the Role of Government

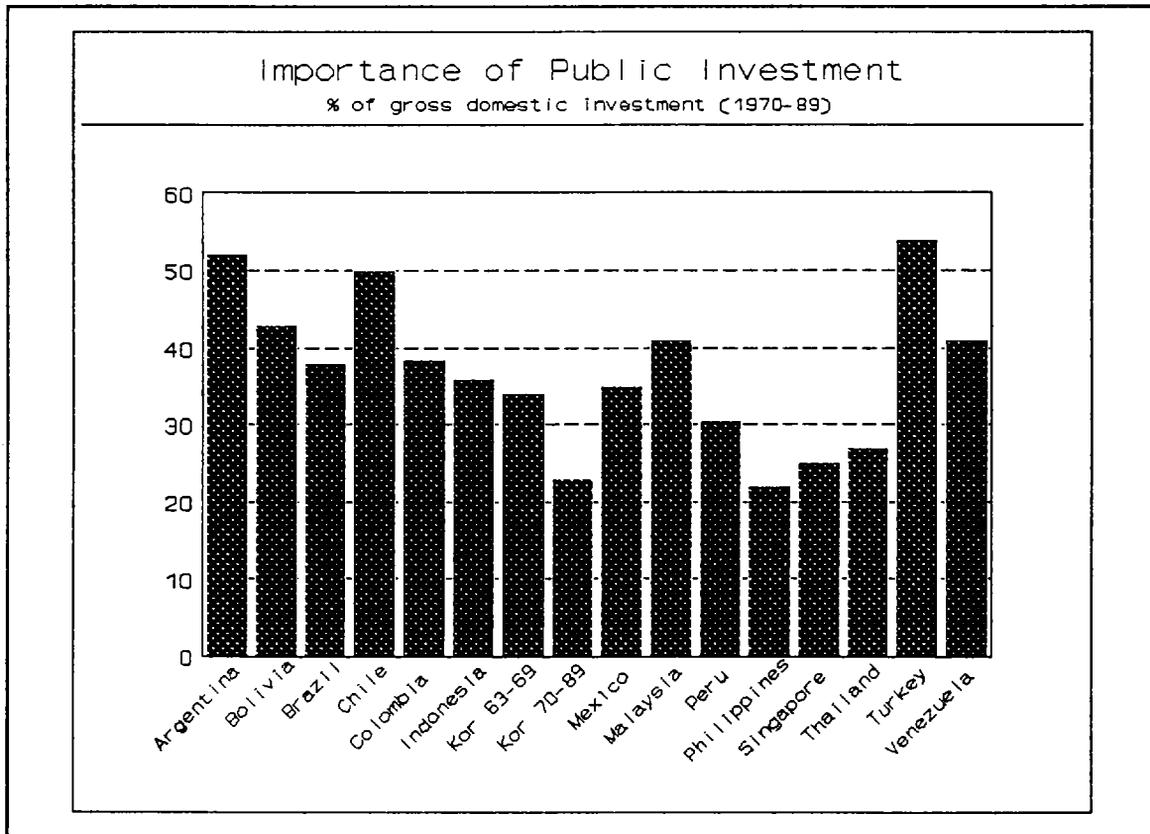
Most development observers are familiar with the disparaging international view of Korea in the late 1950s. Heavily dependent on US foreign aid for food, fuel and other raw materials, Korea was not seen as a promising place for major investments. According to Mr. Kim Chung Yum, the Minister of Finance in the early 1960s, the World Bank's President, Eugene Black, explained his rejection of Korea's investment priorities by noting that highways, steel plants and national monuments produced the lowest return of any investments in developing countries (see Kim 1990). So Korea built the Seoul-Pusan Highway with domestic finance, after it had been rejected by both multilateral and bilateral donors.

Korea's infrastructure ranked well below that of Turkey, Colombia or Taiwan China in 1960. Over the following ten years one-third of gross domestic investment (GDI) consisted of infrastructure investment.⁹ This trend continued in the 1970s when Korea's 33 percent infrastructure share in GDI was more than twice as high as Malaysia's and 50 percent higher than Thailand's. Its share was apparently less than other developing countries, however, (see Figure 9): but this figure understates the true level of public infrastructure investments, because government-invested enterprises (GIEs) did much of their own investing, especially in the 1970s. According to data reported by Sakong (1991), GIEs averaged 16 percent of GDI over the 1963-79 period. By 1980, Korea was well ahead of many developing countries (see Table 6).

Table 6: Building Up Infrastructure			
	Electricity Generation (MKWH)	Length of Railway (KM)	Telephones Installed (per 1000)
	Average Annual Growth Rate, 1960-80 (Percent)		
Korea	17.0	4.7	20.9
Taiwan China	12.9	-0.5	21.9
Turkey	11.1	0.3	9.4
Algeria	20.5	0.4	13.3
Argentina	8.8	--	2.5
* Sources: United Nations Industrial Statistics Yearbook, World Bank's Transport Data, other sources.			

⁹ The infrastructure category includes electricity, gas, water, transport and communications, road and waterway investments.

From the start, Korea put great reliance on self-financing. In its the First Five Year Plan (FFYP), the government stated that "investment resources for the expansion of such government-run or controlled projects as the railroad, communications and electricity must be financed within the relevant corporations themselves by means of their management rationalization and the upward adjustment of public utility charges." The FFYP set Korean National Railway's (KNR) self-financing rate at 40 percent and that of Korea Electric Power Corporation (KEPCO) at 45 percent.



A second feature of Korea's infrastructure is the scale of individual projects. The country's tendency to believe in its own projections has yielded ample rewards. Indeed, the economy's tendency to outperform its plan targets was not as awkward as it might have been had Korea merely invested in small bites. Much of the economic planning in the early days of Korean development was spearheaded by engineers, with economists entrusted merely with securing the requisite financing (D.W. Nam, 1992).

It is hard to quantify the effect of infrastructure investments. However, strong evidence is presented by Kaufman (1991) that the Economic Rate of Return on historical World Bank projects increases by 7 percentage points as the share of public investment in GDP increases from 5 to 10 percent.¹⁰ The absolute rate of return rises from 13 percent to 20 percent in this "high infrastructure case," based on a large sample of 656 Bank projects. And K.S. Lee and A. Anas (1992) argue that in the few cases where public infrastructure was lacking, Korean firms have had to undertake costly investments themselves, for example, to secure reliable utility supplies. Therefore, in addition to direct financial savings, Korean firms received greater certainty about public services. It can be argued that

¹⁰ I am indebted to K.S. Lee for bringing this evidence to my attention.

private firms were "crowded in" to make substantial investments because of the government's infrastructure program.

Of course, it is not merely capital expenditure per se that matters; it is also its quality, its maintenance, and its linkages to other complementary investments. Here Korea's technical capability and its planning apparatus played a large role in the success of its infrastructure program. Data collected by the World Bank's Operations Evaluation Department on 75 completed Bank projects in Korea show that the proportion rated satisfactory was 95 percent, compared with 76 percent for the global sample of almost 500 projects. More telling are comparisons of ex-post rates of return: Korean projects averaged a 20 percent rate of return, compared with 18 percent for the East Asia Region and 16 percent for all Bank regions or 3,000 total projects. Harberger (1978) reports that Korea's net productivity of capital in 1969-71 was more than twice as efficient as the average for the OECD countries or other Asian economies, and second only to Taiwan China (see Fry, 1992 for recent estimates for Asian countries).

The Importance of Savings

Korea has become a nation of savers. Personal savings, which averaged 1-2 percent of GNP in the 1960s, advanced to a 7 percent average in the 1970s, and exploded to 16 percent of GNP in the 1980s. When corporate savings, which have tended to outstrip personal savings except for the tail-end of the heavy industry period (1976-78), and the modest but consistently positive government savings are added, the resulting national savings rises from 10 percent of GNP in the 1960s to 21 percent in the 1970s and peaks of 35-38 percent in the 1980s (see Figure 10). Savings behavior responds most directly to income gains and demographic factors, and only secondarily to interest rates.¹¹ In the case of Korea, personal savings can be said to be largely autonomous rather than policy-induced, in the sense of responding to sustained income growth and to continuous declines in the population growth rates which significantly lowered the dependency ratio.¹² Savers were also able to use a number of savings instruments, formal as well as informal.¹³

The primary objectives of Korean savings are education and housing. House prices (averaging multiples of six times income) and the shortage of mortgage lending, which forces self-financing of purchases, make housing the major motivation for savings.¹⁴ Even the rental market's peculiarities (the advance deposit system or *chonsei*) make for a kind of forced savings.

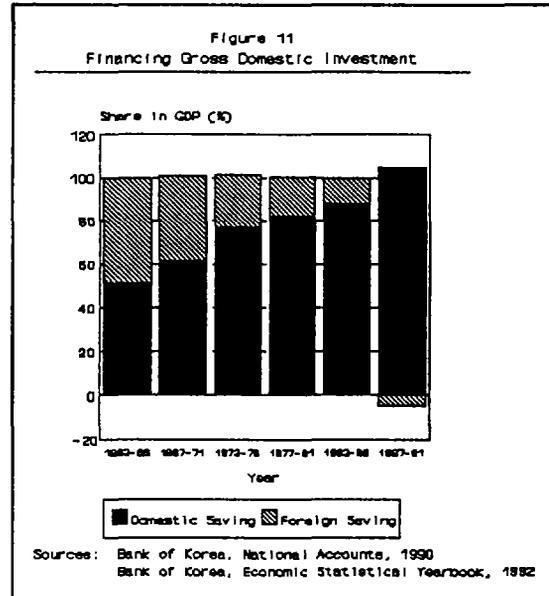
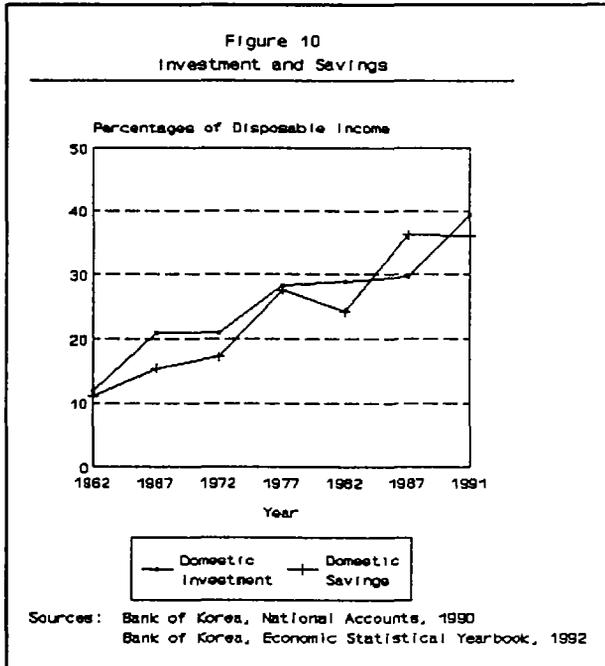
Despite its heavy savings, Korea's investment has been even larger at various critical periods. In 1962, foreign aid financed as much as 80 percent of investments, and throughout the 1960s foreign capital (either assistance or guaranteed foreign borrowings) was financing an average of 35-50 percent of domestic investment. In the post-oil shock periods of 1974-75 and 1980-81, Korea relied heavily on foreign borrowing; it was the world's fourth largest debtor in the mid-1980s. The major role played by foreign capital in preceding and then complementing domestic savings is seen in Figure 11.

¹¹ See Fry (1984) who estimates the effects of Asian savings rates of income gains, population growth reductions and improvements in real interest rates.

¹² See Cho and Kim (1991) and Song (1990) on population dynamics and the importance of early and effective family planning efforts, which lowered the population growth rate from 3.0 percent per annum in 1960 to 2.0 percent in 1970.

¹³ "No-name accounts" are a popular instrument of financial savings. Savings societies are also prevalent and provide savers with credit on a revolving basis.

¹⁴ On the importance of the housing motivation on savings, see Renaud (1988, 1989).



Total Official Development Assistance (ODA) per capita averaged more than \$13 in the late fifties (see Krueger, 1979) which was considerable relative to Korea's then meager GNP. Only perhaps in the case of Taiwan China did so much foreign aid flow into a poor developing country in such a short period of time.¹⁵ In the same fashion that foreign aid substituted for domestic savings in rapidly boosting investment levels, the question arises whether foreign direct investment (FDI) aids or deters domestic savings. In a provocative analysis, Fry (1992) argues that, for East Asia, FDI appears to reduce national savings. Of course his sample of only five countries is dominated by Korea and Taiwan China, which both failed to encourage FDI in their early development years, although according to Korea policymakers in the early 1960s, foreign investors were reluctant to invest in Korea.¹⁶ Nevertheless, it took Korea until 1984 to become an active recipient of original FDI; like Japan, it seems to have opted for a domestically owned investment effort, which required a mobilization and husbanding of national savings.

Importance of Economic Management ¹⁷

Among many achievements of the Korean government's economic management, three stand out. First the real effective exchange rate was maintained within a narrow band of fluctuation. Second, the public sector deficit was kept under control. Third, despite occasional bouts of inflation, real wage increases were not allowed to outpace productivity growth.¹⁸

¹⁵ See Reese Lewis (1992).

¹⁶ Interview with the Hon. Kim Chung Yum, former Senior Secretary to the late President Park.

¹⁷ We are indebted to S.Y. Song for his collaboration in the preparation of this section.

¹⁸ The main exceptions were during the late-1970s due to labor shortages resulting from the Middle East construction boom and during the late-1980s due to labor disputes in the wake of democratization and tightening labor markets.

These achievements were the result of pragmatism and flexibility in economic management. This characteristic is exemplified by the government's comprehensive stabilization program in the early 1980s in response to the second oil shock and the sectoral imbalances of the HCI drive.¹⁹ Unlike the previous "growth-first" era, the government gave top priority to price stability, and implemented drastic policies such as freezing the budget. Even the exchange rate was kept overvalued to help reduce inflationary pressure, depressed exports notwithstanding. To quote an evaluation of the World Bank, "The remarkably successful measures of stabilization-with-structural adjustment undertaken by Korea in the first half of the 1980s are yielding handsome returns ... The substantial and swift adjustment Korea undertook in the early 1980s in response to the second oil shock and rigidities in the economy inherited from the 1970s was indeed impressive ... The adjustment was undertaken in two phases and is widely regarded as a model for other countries to emulate."²⁰ Other evidence of flexibility can be found in the relationship between the Five-Year Plans and Annual Management plans and budgets. The Five-Year Plans aimed to provide basic directions, principles and plan targets, while policymakers were allowed enough room to maneuver to allow for policy responses to changing economic conditions (Jones and Sakong, 1980).

Although the Korean government has consistently pursued an outward-oriented industrialization strategy, the conduct of economic policies has varied depending on the stage of development. It is useful to divide Korea's economic development into three periods. The first period (1962-71) can be characterized as a "growth at all costs" strategy emphasizing export promotion. The second period (1972-79) was dominated by HCI promotion and efforts to modernize farming. The third period (1980-88) was one of stabilization, liberalization and increasing awareness of social welfare.

Exchange Rate Management

Both in terms of purchasing power parity and real effective exchange rates (REER), the won has shown very small changes over time. Its REER variability was reportedly the lowest among 95 LDCs during 1976-85.²¹ However, Korea has not always maintained a competitive exchange rate. The main exception occurred during 1975-79, when the exchange rate was fixed at a constant level for five years due to the burden of interest payments as external borrowing increased rapidly to finance the HCI drive. Another exception was during 1981-83 when the main concern was to help reduce inflationary pressure. Most recently, the won appreciated sharply during 1988-89 as a consequence of the undervalued won resulting from the Plaza Accord in 1985. This delay enabled Korea to establish a foothold in American markets.

It is noteworthy that the Korean government has consistently used devaluation in its economic reform packages. For instance, the won was devalued by 100 percent in 1964 to provide strong incentives for exports. Then it was devalued by 20 percent in December 1974 in response to the first oil shock, and by 20 percent in January 1980, after the second oil shock.²² However, frequent use of devaluation puts further pressure on inflation. And the benefits of devaluation in terms of improvement in the trade balance have been less than anticipated, due to Korea's heavy dependence on imports of raw materials and capital equipment. Nevertheless, despite the tradeoffs involved, a

¹⁹ See Corbo and Suh (1992).

²⁰ Review of Adjustment Lending, World Bank, 1988, p.188.

²¹ Korea's real effective exchange rate showed the lowest variability (0.04) compared with the average variability of 0.16 of 95 LDCs. See Dollar (1992).

²² See Corbo and Nam in Leipziger (1990).

generation of Korean policymakers have used the exchange rate as the key variable to help achieve export targets.

Inflation Control

Throughout the 1960s and 1970s, controlling inflation was second only to the growth-oriented development strategy. Specifically, the Central Bank's financing of the National Investment Fund used to promote the HCI drive and the Grain Management Fund used to support the prices of rice and barley in the 1970s were mainly responsible for inflationary pressure. Accordingly, serious inflation emerged in the 1970s, running at times at a rate of around 20 percent. Since the early 1980s, however, the rate of inflation has decelerated substantially, due to the government's comprehensive stabilization measures, and the then President Chun's personal aversion to inflation.

As aggregate demand policies were devoted to sustaining rapid economic growth, the government relied heavily on incomes policy, mostly in the form of price controls, to combat inflation. Ever since May 1961, when an across-the-board freeze on prices of goods and services was implemented, various forms of price control have been used as a means of slowing inflation. For example, the Price Stabilization Act in 1973 empowered the government to regulate prices of an extensive list of items and implicitly to control wages. Then in 1976, the Price Stabilization and Fair Trade Act enabled the government to monitor price increases of items deemed to be under monopolistic control.

By the late 1970s, however, symptoms of administratively suppressed inflation in the form of supply shortages, black markets, and deteriorating product quality became serious. Furthermore, wages were increasing rapidly due to the labor shortages resulting from the Middle East construction boom, and inflation was galloping in the wake of the second oil shock and the huge liquidity inflow from the Middle East construction. In response, the government became strongly committed to price stabilization by implementing tight monetary and fiscal policies. It streamlined the operation of policy loans. It curbed expenditures, civil servant salaries, and rice purchase prices, culminating in a complete budget freeze in 1983. It kept the exchange rate overvalued to reduce inflationary pressure. It introduced the Monopoly Regulation and Fair Trade Act in 1981 to move away from direct interventions and toward promoting competition. In addition, it started a far-reaching import liberalization program to promote a more competitive environment. Government efforts paid off handsomely, with inflation averaging less than 3 percent a year during 1983-87, albeit aided by stable prices of raw materials, especially oil.

Savings Promotion

The main reason for Korea's relatively modest domestic savings until the mid-1980s was that the government had a low interest rate policy, designed for reducing the cost of capital for export and strategic industries. Real interest rates were negative in the early 1960s and throughout the mid to late-1970s of the HCI drive period. As a result, potential financial savings were invested in either the curb market or property. One notable feature of Korea is the lack of capital flight, influenced no doubt by capital control, but also a strong sense of nationalism.

There was one notable exception to this policy of low interest rates, and it occurred during 1966-71. The government doubled the ceiling deposit rate in September 1965, from 15 percent to 30 percent, and kept high interest rates for five years. The amount of financial savings increased by more than ten times in current prices within five years, due mostly to shifts from the curb market. However, this policy stance was abruptly reversed in the wake of the Emergency Decree of August 3, 1972, which essentially froze the curb market loans to the debt-ridden firms in an effort to avoid a series of bankruptcies.

The recent surge in domestic savings since the mid-1980s can be explained by several factors. Personal savings increased substantially thanks to hefty increases in personal income and high real interest rates. Government savings also increased significantly, as budget deficits turned into surplus. Business savings also increased substantially, due to a lower tax burden and the booming economy. The development of non-bank financial intermediaries replaced the curb market and offered higher returns for savers. The government's policy of applying a low flat tax rate on most interest income, due in part to the lack of a "real name" system whereby asset holders are forced to use their own names in financial transactions, also helped to boost savings.

Fiscal Management

The government's fiscal stance was expansionary until the stabilization period in the early 1980s. The annual consolidated public sector deficit in 1971-82 averaged 3 percent of GNP. Initially, the main items of government expenditure were education, infrastructure and defense. Government spending increased rapidly during the 1970s, largely because of policies to support the grain price and to promote the HCI. Since 1969, the government managed the Grain Management Fund, which was intended to pay a higher price to farmers and charge a lower price to urban wage earners. Deficits in the Grain Management and the Fertilizer Fund were financed through the Bank of Korea and were jointly responsible for as much as 37 percent of total growth of the money supply during 1976-78.

Table 7: Consolidated Central Government Expenditure Composition *							
(in percent of total expenditure)							
	Korea	Philippines	Thailand	Malaysia	India	Brazil	Turkey
Capital Expenditure							
Average of 1970-79	20.7	15.1	23.7	18.5	12.6	11.6	27.5
Average of 1980-90	14.8	18.8	18.9	22.4	13.0	6.1	20.9
Wages & Salaries							
Average of 1970-79	15.8	28.6	23.3	30.6	17.3	15.5	34.0
Average of 1980-90	14.5	28.9	30.0	29.7	12.5	9.6	25.9
Other Purchases of Goods & Services							
Average of 1970-79	26.0	26.0	30.7	16.7	15.8	8.7	14.6
Average of 1980-90	26.4	23.2	29.5	15.0	14.9	7.2	14.6
Interest Payments							
Average of 1970-79	3.5	4.6	7.5	10.5	11.3	7.6	2.7
Average of 1980-90	6.3	21.6	18.9	18.6	16.6	32.9	10.9
Transfers							
Average of 1970-79	34.1	25.7	14.8	23.8	42.9	56.5	21.1
Average of 1980-90	38.1	7.4	2.7	14.3	43.0	44.2	27.6

* Korea: 1970-90; Philippines: 1972-90; Thailand: 1972-90; Malaysia: 1972-90; India: 1974-90; Brazil: 1970-89; Turkey: 1972-89.
Source: IMF, Government Finance Statistics.

Since then, however, the public sector deficit has declined substantially, eventually turning to balance in the late 1980s. This turnaround was due to the fact that tax revenue increased from 10 percent of GNP in the early 1960s to the current level of 20 percent. This growth was helped by the tax reform in 1966-67: as the Office of National Tax Administration was created for effective tax enforcement, income tax rates were lowered, and a system of voluntary filing was adopted to promote compliance. The introduction of VAT in 1977 also boosted tax revenues significantly.

One notable feature of Korea's pattern of government expenditure is the low proportion spent on wages and salaries. At about 15 percent, it is considerably less than in the Philippines, Thailand, Malaysia or Turkey (see Table 7). Capital expenditure is not higher than in other similar countries, and Korea's interest payments have been relatively small. In the 1964 budget, wages and salaries took a third of the budget, as did capital expenditure; by 1972 the former's share fell to 15 percent and by the 1970s the latter's share averaged 21 percent. Korea thus was able to keep a tight grip on its government wage bill, and also to pass a significant share of public investment over to GIEs and off the budget.

Policy Flexibility

Korea's flexible and pragmatic economic management was demonstrated by its successful responses to shocks. After the first oil shock in 1973, the government continued with its growth-oriented policies through export promotion (particularly overseas construction) and external borrowing. As a result, GNP grew at an average rate of more than 9 percent a year during 1974-78. One inevitable consequence of this policy response was a rapid increase of external debt, from \$4 billion in 1973 to \$15 billion in 1978. (Such a rapid increase in external debt, which peaked at \$47 billion in 1985, caused serious concerns for some time.)

Korea made a successful adjustment in the early 1980s in overcoming the second oil shock in 1980, combined with sectoral imbalances in the aftermath of the HCI drive, bad harvests, and the political instability following the assassination of President Park. Shortages of daily necessities emerged, wages increased rapidly, and inflation accelerated, culminating in GNP recording negative growth for the first time and inflation galloping at 30 percent in 1980. In response, the government implemented comprehensive stabilization measures. First, restrictive fiscal and monetary policies were implemented: (i) government expenditure was restrained by reducing the grain price support program, deferring some public investment projects, and suppressing wages of civil servants; and (ii) the money supply was restrained by reducing credit available to the government and reducing and rationalizing policy loans. Second, investment in the HCI was reduced and realigned: the government, in effect, forced each conglomerate to select one of the heavy industries for specialization. Third, the won was devalued and interest rates were increased. Fourth, energy demand management policies were vigorously applied, and the full price of oil price increases was passed through. This structural adjustment program was highly praised by the World Bank for its speed and effectiveness.

An equally important observation is that when selective industrial intervention conflicted seriously with prudent macro policy the former was abandoned. Thus, Korean policymakers had no fear of policy turnarounds, and were able to shift gears quickly and efficiently. The policy flexibility of the Korean government is a model for other developing countries to emulate. A further example is the way in which trade liberalization was handled.

Trade liberalization began in earnest in 1981 when Task Force recommendations were adopted and plans announced to move from a 75 percent automatic approval list (based on number of items) to 95 percent by 1988. The public was convinced by official pronouncements that trade reform was needed to increase export competitiveness and to appease trade partners. Precise annual targets were pre-announced with the number of items to be added to the automatic approval list. This opening was a dramatic departure from the previous import licensing regime of the 1960s and the vigorous import restrictions that attended the HCI drive. (At the height of HCI, 95 percent of all manufacturers by value were restricted items.) Not only was trade liberalization a dramatic departure from past policy, but it was also implemented without backsliding and a minimum of offsetting tariff increases. Once the political leadership was convinced that policy change was warranted, it was steadfastly implemented in typical Korean fashion. By 1988, only 367 out of a total of 7,915 items remained on the restricted list.

II. INDUSTRIAL POLICY

Introduction

Although Korea's industrial policy began much earlier in the Park regime, many associate the Presidential Declaration on Heavy and Chemical Industrialization (HCI) Policy of January 12, 1973 as the moment when Korea turned to modern industrialization. Korean documents in 1975, published by the HCI Promotion Council and kindly made available by Mr. O. Won Chul, its Secretary, clearly state that:

"By combining educated cheap labor of good quality with foreign capital and technology which will be made available by the established credibility enlarged and absorption capacity of the Korean economy, the development of heavy and chemical industries will be made economically feasible."²³

With the prophetic words, Korea launched its most controversial policy — the identification of and support for six strategic industries, including steel, petrochemicals, (non-ferrous) metals, shipbuilding, electronics and machinery. Each industry was supported by its own promotional law; according to government's 1975 manifesto, the first three were selected "with a view to enhancing self-sufficiency in industrial raw materials" and the other because "they are going to be developed into technology-intensive industries."²⁴

What separates Korea from other developing countries is not only the fact that it was largely successful in its efforts, but more importantly that it was conscious government policy from the outset to be internationally competitive. Again quoting from the 1975 HCI manual:

"In the development of HCI, economy (sic) of scale, efficient operation, and competitive prices are prerequisite, since these are the industries which have vast inter-industry effects. The competitiveness of HCI is, therefore, fundamental to the whole economy. Economy of scale is especially required when we consider that domestic markets are so limited that HCI should be developed as export industries. In other words, economy of scale should be supported by an expansion of markets through export promotion. Most projects of the HCI, in this regard, are now under construction to have their unit production capacity running to an international level so that they may secure competitiveness on the world market, and enhance internal economy effect as well."²⁵

The second feature which characterizes the HCI period was its detailed planning. The 1973 Industrial Site Development Promotion Law created the Industrial Site and Water Resource Development Corporation (1974), which was the key agent in building various industrial complexes, including Onsan and Changwon, and Yecheon Chemical. Harbor, road and water investments were coordinated and provided as part of social overhead capital investments.

The third distinctive aspect of Korea's industrialization planning was its forward-looking nature. Korean documents published in 1973 dutifully note Japan's export performance in 1955-71 and

²³ Heavy and Chemical Industry, 1975, p.8.

²⁴ Ibid. p.11.

²⁵ Ibid. p.12.

its composition of manufactures. Furthermore, Korean plans are explicit in saying that only up-to-date technology will be encouraged. This technological direction was undoubtedly aided by the return of U.S.-educated scientists and engineers, who were recruited with repatriation allowances, high salaries, and considerable power. Yoon (1992) reports that the "reverse brain drain" began under President Park's urging and the formation (with U.S. support) of the Korean Institute for Science and Technology, (KIST) in 1966, an institution he strongly favored. This "technocratic aristocracy" did much to foster Korea's rapid technological advance.

The fourth and most controversial aspect of Korea's industrialization is its financing. Volumes have been written on the subject, including World Bank (1987), Amsden (1989), and Stern, et. al. (1992). Not only were public resources directly mobilized for HCI financing via the National Investment Fund; even more significantly, banks were directed to lend to industry, often at preferential rates. In addition, the government provided a plethora of tax incentives as well as subsidized public services. The true cost of the HCI promotion will thus never really be known.

Evolution of Industrial Policy²⁶

Commentators have tended to divide Korea's industrial policy history into three distinct stages: the takeoff, generally thought of as 1961-1973, when aggressive promotion of exports was combined with classic protection at home. Although interventions were manifold, the net effect was a regime favorable to exporters but generally neutral between one sector and another. By contrast, the HCI drive of 1973-79 represented a major shift in favor of specific industrial targets and a wide-ranging commitment by Government to use all levers at its disposal to steer resources to the HCI sectors and to overtly direct its development. In the 1980s following macroeconomic difficulties, this approach was replaced with a more neutral attitude based largely on functional incentives, but one that still had to cope with some of the costs of the HCI period.

Industrial Takeoff

This period featured a strongly dualistic trade regime of aggressive promotion of exports and protection of domestic markets. Korean policymakers maintained close control over trade, exchange, and financial policy, as well as aspects of industrial decision-making. In contrast to other countries, however, they used these instruments in an integrated fashion to pursue the primary objective of export growth. The net effect of these policies was a trade regime that was biased in favor of exports as a whole, but essentially neutral with respect to the composition of exports.

The first instruments of export promotion were highly discretionary. Exporters were supported with multiple exchange rates, direct cash payments, permission to retain foreign exchange earnings for private use or resale, and the privilege to borrow in foreign currencies and to import restricted commodities. Even as discretionary incentives were gradually replaced by more automatic instruments, exporters received significant concessions, such as wastage allowances permitting them to import (on preferential terms) greater amounts of intermediate inputs than required in production, concessional interest rates on export loans, preferential access to working capital, and tariff exemptions to direct and indirect exporters. In part, these interventions allowed Korean exporters to avoid some of the distortions involved in the protection afforded to domestically-oriented activities. Essentially, the policies amounted to off-budget subsidies for exporters.

²⁶ This section is based in part on previous work by Leipziger (1986), Leipziger and Petri (1987), and World Bank (1987).

Support for exports was channelled through the state controlled banking system. Government objectives were implemented through policy loans – bank loans explicitly earmarked for particular activities or industries, and lent passively by banks at interest rates below those charged for general lending purposes. Following explicit government directives, banks used export performance as the criterion of creditworthiness.

By the late 1960s, therefore, the main features of industrial policy were: (a) moderate overall protection of domestic markets, offset by special subsidies to exports; (b) approximately world market pricing of inputs and outputs across different export products; (c) high protection of the domestic market in industries with poor export prospects; and (d) high protection of final consumer goods, relative to industrial raw materials and capital goods. Overall, protection did not significantly distort either the general level or the inter-industry pattern of export incentives. Consequently, the emerging export structure reflected comparative advantage more closely than is generally the case in protected economies. Moreover, Korea's trade deficits reflected heavy imports of raw materials and intermediates, not of final consumption goods.

The Heavy and Chemical Industry Drive

Buttressed by the six promotional laws issued during the Second FYP (i.e., for Industrial Machinery - 1967, Shipbuilding - 1967, Electronics - 1979, Steel - 1970, and Petrochemicals - 1970), President Park's 1973 Decree mobilized Korea's bureaucracy to achieve his goals. Targets set in the Third FYP included physical quantities of steel, ships, and autos to be produced by 1980. The most remarkable feature of these plans was that each industry designated for support was to go through four pre-determined phases:²⁷

- (i) *minimum scale*, during active government planning and support accompanies protection;
- (ii) *optimum scale*, at which time government lending and support continues but the industry matures;
- (iii) *international scale*, by which time industries are expected to be self-sustaining and initiative is to come from business itself; and
- (iv) *international first-class scale*, by which time the industry is expected to be internationally competitive.

As can be seen in Figure 12, it was expected to take 10 years from the time of heavy government support for HCI during the Third FYP until international competitiveness was reached in the Fifth FYP. By and large, Korean planners were correct: HCI exports reached world class scale in the mid-1980s. By the late 1980s, indeed, trade liberalization had progressed very far in manufactures, and helped by an appreciating Yen, Korean exports in key sectors had successfully entered Western markets.²⁸

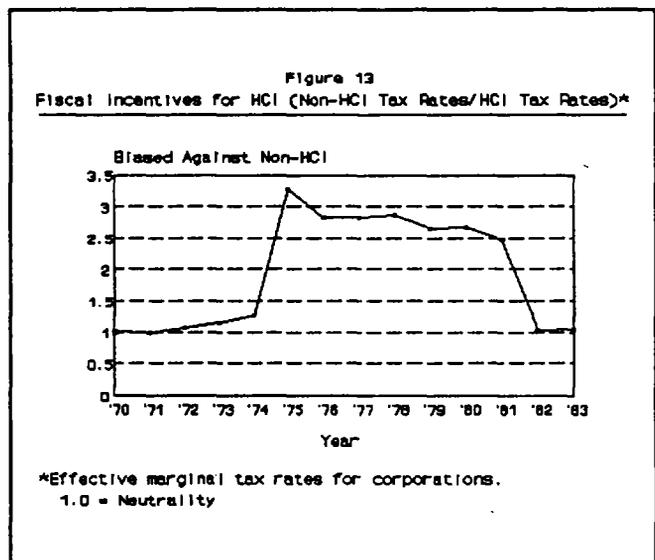
²⁷ HCI Promotion Council (1975).

²⁸ The U.S. market was Korea's largest and most successful, although even these anti-dumping suits served to raise entry costs. See Leipziger and Shin (1990).

Government support for industry was massive. It included import protection, fiscal preferences, and, most importantly, preferential access to credit. Evidence from Hong (1979, 1985) shows that restricted imports of machinery rose from 34 percent of the total in 1968 to 61 percent in 1978, while a similar measure for iron and steel rose from 28 percent to 75 percent. Tariff rates and domestic content laws were also used to protect infant industries. According to the World Bank (1987), only 41 percent of electrical appliances and electronics were subject to automatic approval in 1981, compared with an average of 75 percent for all import categories.

As for fiscal preferences, most tax obligations for promotional industries were exempted for five years, and often cut in half for an additional three years. The bias towards the HCI sector produced a comparatively light tax burden compared with other industries (see Figure 13). The government relied heavily on its control of the credit system to provide "strategic" industries with access to substantially subsidized bank loans. The potential for subsidization was great due to the complicated system of interest rate ceilings that prevailed throughout the 1970s. Real bank interest rates were negative during most of that time (see Figure 14), and bank rates were anyway much lower than those in the informal credit markets.

The National Investment Fund (NIF) was especially created in 1974 to help finance the HCI drive. It was funded by the compulsory deposit of savings by all managers of pensions, savings, postal savings accounts, and life insurers or equivalent purchases of NIF bonds. It lent as much as two-thirds of its portfolio to HCI projects; however, its real impact stemmed from its "announcement effect" on bank lending practices. Policy loans, the directed credit instrument of Government, rose from an already high 41 percent of total domestic credit in 1975 to 51 percent in 1978 with real interest rates being sharply negative at the height of the HCI drive (see Figure 14).



It is this period of underpriced capital that has drawn the attention of Amsden (1989) and the criticism of Korea's neo-classical economists. At the same time that targeted capital-intensive industry received these preferences, light industries such as textiles faced fierce discrimination in access to credit. This pattern of increasing preferences for HCI industries is seen clearly in Figure 15 reproduced from the World Bank (1987), where 1.0 represents neutrality in industrial finance. Even more importantly, the volume of credit destined for light industries fell from an average of 66 percent of the total in 1973-74 to 40 percent in 1975-79.²⁹

²⁹ See World Bank (1987), Vol. II, p.156.

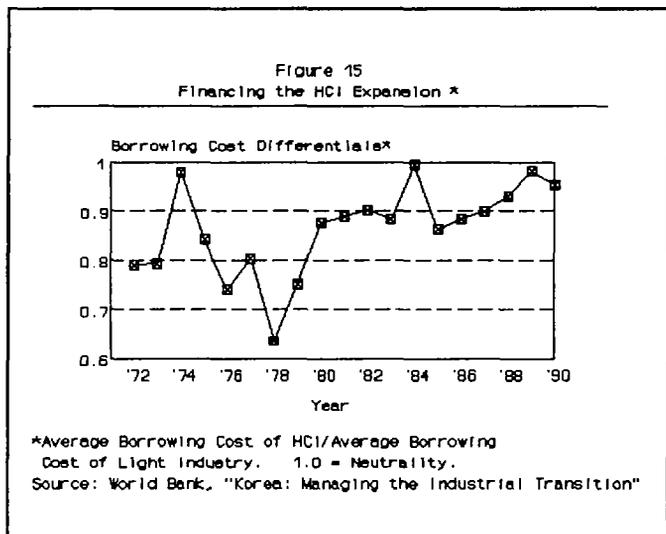
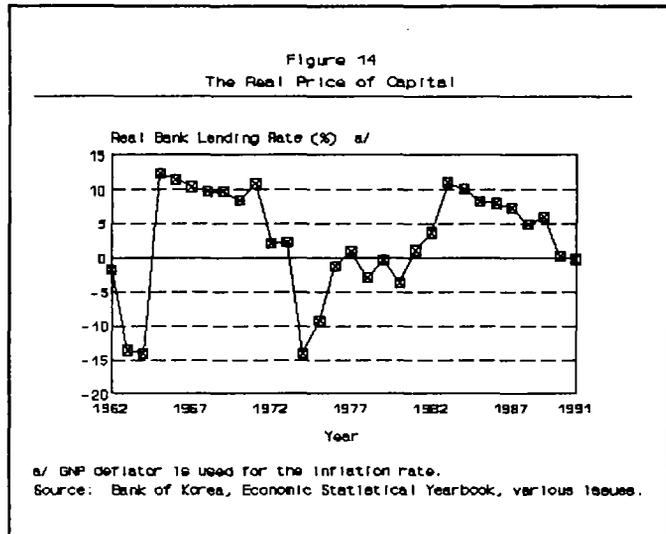
A Shift Towards Functional Incentives

Unlimited support for strategic industries was abruptly reversed in 1980. Certainly, President Park's assassination was one reason for the change; but the second oil shock had derailed Korea's macroeconomic balances, and the excess capacity in HCI was no longer tolerable. Korea's rapidly rising ICOR — it reached almost 5.0 in 1975-80 — showed that investment was yielding low returns. It became clear to economic policymakers that a shift in strategy was needed as evidence of financial losses and structural distortions caused by the HCI drive mounted. Retrenchment was necessary.

The new government had simultaneously to stabilize the macroeconomy, solve mounting financial problems in major industries, and establish new directions for industrial policy. As far as industrial policy was concerned, the new approach was contained in the Fifth Five Year Plan, written in 1979. The Plan's emphasis on indicative planning and a greater role for the market was eventually translated into a range of financial and import liberalization programs.

The government began to reverse its past preferences for heavy industry firms by reserving credit for small and medium firms. It reduced its role in specific decisions on credit allocation, and abandoned policies which favored the HCI sector. In the area of industrial finance, the government: (i) sold the commercial banks to private shareholders, although it continued to exercise significant influence over banking decisions; (ii) established new financial institutions and permitted some growth in the international activities of domestic banks and the domestic activities of foreign banks; (iii) increased real interest rates, reducing the gap between the organized and unorganized sectors of the financial market; and (iv) substantially reduced the scope of interest rate subsidies for particular borrowers.

Despite this general thrust toward neutrality, the government continued to play an active role in several areas of policy. Intervention since 1979 has focussed on the restructuring of distressed industries, support for the development of technology, and the promotion of competition. Restructuring operations became frequent in the wake of sharp reversals in world markets and the overambitious investment programs of the 1970s. The firms and industries involved were large and highly leveraged, with their loans representing a significant share of commercial bank assets. These factors, coupled with the relative thinness of Korean capital markets, drew the government deeply into the restructuring process. The plans it helped orchestrate involved mergers, capacity reduction, and special financial rescheduling with commercial banks (issues are discussed at greater length in Leipziger, 1988). Although



the government was no longer involved in picking winners, it did occasionally block industrial entry (such as when Samsung wanted to enter the automobile market), possibly for strategic economic reasons.

To many observers, the key to Korea's future industrial policy lies in its approach to financial reform. The residual difficulties of the financial sector include controlled interest rates; the still huge proportion of domestic credit going to "policy loans"; passive rediscounting at official behest, which manages to keep the questionable portfolios of some industries performing; and, above all, the implicitly socialized or shared risk between government and business on borrowed funds. On these see Nam (1990, 1991) and Leipziger and Petri (1991). Clearly, the remnants of past policies are part of the price Korea is paying for earlier intervention and its failure to establish an independent financial sector. The critical question is whether this was a price worth paying, the subject of the following section.

An Assessment of HCI

The HCI episode in Korea is perhaps its most controversial period of economic history. Proponents like Amsden (1989) stress the virtues of having got the prices wrong in order to create dynamic comparative advantage. Opponents like Yoo (1990) stress the costliness of the distortions, the excesses and waste, and compare them unfavorably with Taiwan China, which achieved at least as enviable a growth record without the forced transformation of its economy. The World Bank (1987) took a middle-ground position. It acknowledged that dynamic gains were made possible in record time, as evidenced by the high percentage of exports in a number of HCI sectors by 1983.³⁰ But it also recognized the low levels of capacity utilization in some industries, such as machinery and fabricated metals in the 1970s, which caused large economic losses. Moreover, light industries, such as textiles, suffered greatly³¹ as a result of the HCI drive, and more importantly, lasting scars were left in the financial sector, the costs of which are still being borne today (see Nam, 1990).

Any verdict on HCI depends largely on the period during which the assessment is made and also on the approach adopted. Yoo (1990) attempts to measure the marginal products of capital applied to HC and non-HCI activities and finds that the returns to invested capital were lower in the HCI sector. His findings are dependent on some critical assumptions, but the general proposition that capital's efficiency was not higher in HCI sectors, despite the subsidies showered on them, may well be true, measured in the late 1970s and early 1980s. An interesting test would be to extend the analysis to allow for some dynamic returns. Yoo, however, concludes that "the net effect of the HCI policy on the export competitiveness of the heavy and chemical industry group seems to have been nil or negative" when compared with Taiwan China's performance.³²

Kim (1990) reviews some of the outcomes of the HCI drive, including a deteriorating trade balance, sharply increased foreign debt (up from \$4 billion in 1973 to \$15 billion in 1978 before the second oil shock), an increase in inflation due to classical overheating, a weakening of financial discipline as firms denied credit borrowed heavily on the curb market, and rising unit labor costs as wages were pushed up by expanding labor demand. Kim also argues that income distribution worsened during the HCI drive.

Another interesting assessment of HCI is contained in Stern et. al. (1992). In this treatment, the joint team from HIID and KDI categorized industries as follows: (i) those investments which were

³⁰ World Bank, Managing the Industrial Transition, Vol. II, p.15.

³¹ World Bank, op.cit., Vol. II, Chapter 7.

³² Yoo, op.cit. p.99.

successful — defined as yielding rates of return higher than the cost of capital either *ex ante* (i.e., a normal industry) or *ex post* (i.e., an infant industry); and (ii) those which were unsuccessful — yielding negative internal rates of return — despite *ex ante* expectations to the contrary (i.e. unsuccessful infants) or due to changes in relative prices (i.e., declining industries). The "market-conforming" industrial successes and failures are easy to discern. Among promoted industries, electrical equipment was a clear success based on existing comparative advantage of high quality, low cost labor and international markets pioneered by the Japanese. The example of a failed industry (which according to Stern exhibited initially positive rates of return) is fertilizers, where the cost of raw materials caused losses. In the group of what Stern calls "non-market conforming industries," there are failures such as machinery and aluminum, and successes such as steel and automobiles. Based on the sample of projects selected for analysis, Stern finds no evidence to suggest that Korean policymakers were more astute in picking winners than policymakers elsewhere.

The World Bank (1987) concluded by saying that "the HCI drive was overambitious and resulted in serious misallocations of resources. Nevertheless ... many of the goals of that policy were in fact achieved. Exports of HCI did not quite reach the target of 50 percent of total exports by 1980, but exceeded the target only a few years later and reached 56 percent in 1983 ... In a comprehensive dynamic perspective, [they concluded], it is difficult to demonstrate that an alternative policy would have worked better."³³ On an industry-by-industry basis, the World Bank's assessment does not differ much from that of Stern et. al.; but the overall judgment is quite different. Stern concludes: "In short, while there is no evidence to support the contention that Korean policymakers were able to pick winners, neither can we conclude that the shift to the HCI policy helped promote Korea's development."³⁴ Kim (1990), like the World Bank, highlights the weak capacity utilization in selected industries, but concludes that "capital was transferred into physical assets, most of which were competitive when renewed growth in demand restored international prices to levels covering the replacement costs of efficient new producers".³⁵

Since neither a full costing of the HCI drive nor a counterfactual exercise is possible, it is perhaps wise to accept the fact that short-term dislocations occurred, damaging both labor-intensive industries and the macroeconomy. Still, the HCI's objectives were largely met once the effects of the second oil-shock were overcome. The structure of Korean manufacturing was radically altered; and HCI achieved, albeit with a delay, the goals set out in the Third FYP. Most of the distortions have proved reversible, except for the weaknesses of the financial sector, which still remain today.

The interesting line of inquiry, from the point of view of replicability, is the assessment of infant industries. Why did some succeed, while others failed? And how did Korea manage to get a sizeable set of world class industries? To answer the first question, we draw on Box A and Box B, the stories of Pohang Steel and the Changwon Complex.

The differences between Korea's most successful and least successful infant industries are manifold. Pohang Steel was a clearly defined project with superior management, strong implementation, a captive domestic market, Presidential backing, a tried-and-true technology, and above all a goal of exporting. Changwon suffered from divisive management, an overambitious and diffuse industrial mission, and a limited domestic market; above all, at heart it was an import substitution activity. Pohang went on to be one of the world's most efficient steelmakers, while Changwon has undergone many ownership changes and industrial restructurings.

³³ World Bank (1987), p.45.

³⁴ Stern, *op.cit.* p.V-22.

³⁵ Kim, *op.cit.*, p.34.

Box A

Pohang Steel: Korea's Most Successful Infant Industry

In order to supply its emerging capital-intensive industries, Korea attempted in the early 1970s to build a state of the art integrated steel plant. The Pohang Steel Company (POSCO) was a bold and successful gamble. According to Auty (1990), POSCO attained global competitiveness in 1981, when the third-stage expansion was completed, because it could quickly reach full capacity as each successive stage came onstream. What accounted for its success?

First, although POSCO was a state enterprise, it had powerful and independent leadership in the person of former General Park Tae Joon. Through his access to the then President Park, he was able to clear away bottlenecks and complete construction of Pohang in record time. Second, financing was secured largely through Japanese reparations funds (at subsidized interest rates); even more importantly, state-of-the-art technology and technical assistance were provided by Nippon Steel. Third, the high potential productivity of a new steel plant was successfully captured by an efficient and cooperative workforce and strong domestic demand. Low construction and operating costs along with strong management are reflected in Pohang's ability to produce steel as efficiently as Japan in the early 1980s, the true test of an infant industry. Put differently, Korean steel fits the Stern et. al. (1992) typology of an industry whose economic rate of return ex ante fell short of the real price of capital but which ultimately passed the efficiency of capital test, ex post.

Pohang is also a case of government selecting an industry for promotion, after, according to policymakers Kim Chung Yum and Choi Gak Kyu*, the private sector declined involvement and all aid donors rejected the project. It benefitted from highly subsidized capital, a protected domestic market, discounted public services and utilities, and other preferences mandated by the Steel Industry Promotion Law of 1970. The verdict is unanimous that the industry is a technical success, while the verdict on financial success is mixed, with Auty (1991) doubtful and Amsden (1989) and Stern (1992) convinced.

The strong conclusion which emerges, however, is that a risky, major investment project such as Pohang could not have proceeded without direct government involvement. The project would not have succeeded without Presidential support, independent corporate management, and world prices as the ultimate yardstick of technical efficiency. Korea's version of state capitalism yielded a dynamically efficient industry, capable of supplying downstream users, financing its own second-generation expansion through retained earnings, and propelling Korea into a capital-intensive stage of industrialization perhaps a decade earlier than expected.

* Respectively Chief Secretary to the President and Minister of Commerce and Industry at the time.

These contracts need to be seen against the background that more infants have succeeded in Korea than almost elsewhere, with the possible exception of Taiwan China (see Wade, 1991). This is despite the fact that Korea's industrialization drive involved much higher risks, as the chosen industries were highly capital-intensive and large, such as shipbuilding, steel and autos. These industries can be viewed in the following light:

- First Korean decision-makers did select industries in which the achievement of dynamic comparative advantage was possible. It seems clear that their choices were influenced by the manufacturing structure of Japan.
- Second, the scale of support was massive, and project execution was largely excellent. In cases where it was not, changes were made quickly and decisively.
- Third, self-reliance and ultimately internationally competitive performance were expected, and the authorities were not patient with non-performers. Moreover, government was basically indifferent between using the private or the public sector to achieve its industrial goals. One need only look at the frequent ownership changes of the heavy machinery facilities at Changwon to see this point.
- Fourth, the institutional environment in Korea favored success. Specifically, the scarcest resource, capital, was directed generously towards emerging growth industries, and tax incentives and protection were offered. Moreover, the FYPs signaled that Government stood behind these emerging industries, and a can-do (or cannot-fail) mentality was shared by industrialists and bureaucrats.
- Fifth, tremendous efforts were made to absorb foreign state-of-the-art technology, aided by the return home of Korean scientists and engineers.
- Sixth, progress was continually monitored, and Koreans were not untouched by fear of political and economic reprisals.

Indeed it is impossible to draw lessons from the HCI experiment or any other period of Korea's recent economic history without a clear discussion of the role of Government in the industrialization process.

Box B

The Changwon Industrial Complex: An HCI Fiasco

The Changwon Complex in the southern part of Korea mirrored to some extent the push into integrated steel-making; however, the differences far exceeded the similarities. First and foremost, the heavy machinery complex was meant to supply the Korean power company (KEPCO) with thermal power generating equipment as well as machinery for other HCI sub-sectors. As such it resembled much more closely a traditional import-substitution industry. Second, it was entrusted to a subsidiary of Hyundai, a private company and since its scale was enormous (unparalleled according to Stern 1992 in the developing world and with a product diversification and degree of integration rarely found in the industrialized world), it was both risky and costly. Begun in 1976 and partially halted in 1979, it became a symbol of the unbridled engineering focus of the HCI drive, although according to Stern and his associates, the ex ante ROR was favorable. Where it differed from steel-making was that it had to rely on licensed technology in many areas and uncertain markets. In fact, KEPCO's switch to a nuclear investment program undermined Changwon's viability. Changwon's coming on stream in the midst of Korea's worst economic crisis in 1980-81 certainly hurt, but Changwon was beset by poor technical decisions and muddles as well. Restructuring continued in the early 1980s, but low capacity utilization continued to plague the complex, and by all accounts it was not a profitable investment.

Source: Stern (1992) and World Bank (1987).

III. THE ROLE OF INSTITUTIONS

There can be no doubt that Korea's rapid economic development was Government-led. Various authors refer to market-conforming policies or market-guided policies, but it is instructive to see reality not only with hindsight and with the theoretical perspective of today but from the views of the policymakers then. According to D.W. Nam, Korea's Finance Minister, 1969-74 and Deputy Prime Minister 1974-78,

"In the 1960s, the Korean government had to take the initiative in almost all areas of development effort. It was busy introducing new institutions and reforming existing ones, building up social infrastructures, negotiating with foreign governments and international organizations for economic assistance, undertaking strategic investment projects, both public and private, and, above all, campaigning to mobilize and motivate people towards fulfilling the development objectives."³⁶

The evidence is clear that the Korean government had (i) a clear vision of its industrial, as well as agricultural, goals; (ii) an ability to control the economy via economic instruments, supplemented with jawboning and coercion when needed; (iii) a willingness to share risks with industry or, put differently, to use business to achieve national goals; (iv) an excellent track record of creating institutions, such as development banks, trade promotion agencies, and general trading companies; and (v) a unique ability to make pragmatic policy decisions.

The evidence is also clear to Cho (1990) that "the system of resource use in Korea throughout the period of rapid growth, and particularly during the 1970s, deviated markedly from the competitive market system."³⁷ It may be that C.H. Lee (1992) is correct and that government and business formed a quasi-internal organization which could allocate capital efficiently. More likely it seems that Government did not so much pick winners as create winners with widespread and lasting interventions. One should not let the 1973-79 period dominate Korean economic history unduly, however. Korea was highly successful in the 1960s and again in the 1980s. Much of this success revolves around (i) Korea's bureaucracy and planning apparatus, led by the Economic Planning Board; (ii) the unique relationship between business and government; and (iii) the intangibles of policy-making which revolve uniquely around culture and country-specific circumstances, but which account in large measure for the pragmatism, consistency, and decisiveness of policy formulation and implementation.

The Government and Bureaucracy

On taking power through a military coup in 1961, President Park Chung Hee made a commitment to achieve rapid economic development and national security. He believed that in order to attain these objectives, a restructuring of the government would be necessary. He wanted to replace the existing cabinet style of government with a form of government in which power and authority were concentrated in the presidency. President Park also saw the need for an organization that would not only formulate consistent economic policies but coordinate their implementation. To fulfill this need, he approved the recommendation for establishing an Economic Planning Board (EPB).³⁸

³⁶ Nam (1992), p.7.

³⁷ Cho, *op.cit.*, p.36.

³⁸ The idea of an EPB with its three-fold function was originally suggested to President Park in a memorandum prepared by Chung Jae-Suk, who at the time was Director of Planning in the Ministry of Reconstruction. Mr. Chung later became Minister of Trade and Industry (1972-80).

Set up in 1961, the EPB combined several policy functions previously entrusted to different Ministries: (i) the planning function, originally located in the Ministry of Reconstruction, which had worked with USAID in the aftermath of the War; (ii) the power of preparing the government budget, which was removed from the Ministry of Finance (MOF);(iii) the function of collecting and evaluating the national census and other statistics which was taken from the Ministry of Internal Affairs. Responsibility and jurisdiction over the inflow of foreign capital and technology were vested in the EPB as well. The EPB had three main functions: (i) it planned and formulated economic policy programs; (ii) it coordinated economic policies implemented by individual Ministries; and (iii) it evaluated policy programs implemented by individual Ministries on a continuing basis.³⁹

Since effective coordination of policies among Ministries required both power and prestige, the EPB was made a "Super Ministry." It was the only Ministry in the government to be led by the Deputy Prime Minister (DPM), who was also made chairman of the Economic Ministers' Council. Although the DPM and the Economic Ministers' Council were subordinate to the Prime Minister and the State Council on the organizational chart of the government, they were given considerable autonomy. Few economic policies and programs approved by the Economic Ministers' Council were overruled by the State Council.

Part of the reason for conducting economic policy in this way was that the DPM received his instructions directly from the President, i.e., not through the Prime Minister. The DPM often reported first to the President when he needed to obtain informal approval on any new policy adopted in the Economic Ministers' Council. Thereafter, the policy proposal would be sent to the State Council for formal approval. In effect, the DPM was deputy to the President rather than to the Prime Minister on economic policy matters.

Apart from establishing the EPB, a number of new government agencies were launched, and several existing agencies were revamped to advance the goals of economic development. Three of them are noteworthy. The first concerns the National Tax Administration. Until this agency was completely restructured in 1966, the Korean government had only limited ability to collect the necessary revenues. Shortfalls had been made up largely from US aid, and as that declined, there was a critical need to increase tax revenues.

This need was met by reorganizing the internal tax office into the Office of National Tax Administration (ONTA). It was responsible for collecting a larger amount of taxes through vigorous enforcement of existing tax laws. To ensure effective tax collection, President Park not only specified tax collection targets but instructed ONTA to set up a tax collection situation room in the Office of the President, commonly called the Blue House.⁴⁰ The President himself would check progress on meeting tax collection targets on a daily basis. Without such concentrated efforts to increase tax revenue, the Korean government would not have come close to achieving an overall budgetary balance by 1968 in the face of rapidly dwindling US aid.

See the record of an interview with Mr. Chung conducted by the authors.

³⁹ The evaluation and assessment of government policies and programs has also been carried out by the Office of the Prime Minister. But, that office has concentrated more on non-economic programs.

⁴⁰ For an illuminating account of the significance and operational style of ONTA, see C. Kim (1991), pp. 44-46 and Choi (1991), pp.33-34.

The second notable change was the establishment of the Office of Labor Affairs. Historically, the labor movement in Korea started as part of the independence campaign, so was very political. In the early years after World War II, it had been infiltrated by leftist groups. Furthermore, even in the early 1960s, there was a widely held fear that trade unions could be manipulated by North Korea to its advantage. In order to ensure peace on the labor front, it was necessary for the government to be attentive to the needs of ordinary workers. The Office was therefore established not only to enforce new labor standards, but also to protect workers' rights in such areas as industrial disablement. Furthermore, it organized vocational training programs to help workers acquire the new skills needed for industrial development.

The third notable change was the establishment of the Ministry of Science and Technology (MOST). As the economy began to take off, there was an urgent need for Korea to increase the inflow of foreign technologies and develop its own technologies. To achieve these objectives, the Bureau of Technologies, established first in the EPB, was expanded and transformed into a full-fledged Ministry in 1967.

Bureaucracy: Staffing, Dedication, and Access

During the period from 1948 to 1960, the Korean bureaucracy was a kind of spoils system. Although civil service appointments were based on examinations, these examinations were rather perfunctory. In April 1963, however, the National Civil Service Law was passed to serve as the legal base for professionalizing the entire national bureaucracy. It adopted three key principles: (i) with few exceptions, appointments to be based on the results of open competitive examinations; (ii) promotions to depend on the evaluation of the performance of each individual in a particular position; and (iii) all civil servants to be guaranteed job security. This last point meant that regular civil servants could not be dismissed unless the grounds for dismissal were legitimate and due process followed.

As far as recruitment is concerned, Korea's professional bureaucracy is a two-tier system, similar to the system which exists in Japan.⁴¹ This system allows exceptional people to begin at advanced levels and has attracted many well-qualified and ambitious individuals to government service. Those who pass the high civil service examination can start at a higher level (currently Grade 5), which would take ordinary recruits several years to reach. Although many who have started at the bottom of the bureaucratic hierarchy are allowed to move onto higher grades based on on-the-job performance, the high civil service in Korea has always been dominated by those who have passed the high civil service examination. Competition for passing this examination has been intense. Between 1963 and 1985, some 157,000 persons took it, and only a little more than 2,600 (1.7 percent of the total) succeeded. Of those who succeeded, nearly all had a college education, and more than three quarters of them were under the age of 28.

Because of this rigorous selection process, senior civil servants have been highly regarded by the rest of society. This respect no doubt reflects the long Confucian tradition of honoring scholar-bureaucrats. Members of the advanced civil service have therefore tended to look upon themselves not only as the guardians of national interest but also as an elite group of leaders. In this respect, the Korean bureaucracy today shares not only many characteristics of the Yi-dynasty bureaucracy but also those of the Japanese bureaucracy.

However, like its counterparts elsewhere, the Korean bureaucracy has some flaws. Often it has tended to be exclusive and not receptive to the views of outsiders. Fortunately, during the 1960s and 1970s these negative traits have been offset in various ways. For example, since the beginning of

⁴¹ Choi, *op.cit.*, pp.25-26.

the Saemaul (New Village) Movement initiated by President Park in November 1970, many short-term educational forums and training sessions have been organized which civil servants are required to attend, together with leaders from other sectors of society. Such occasions have helped Korean high civil servants to a greater understanding of the concerns and interests of the country as a whole. Members of the Korean bureaucracy have also maintained close links with outsiders who they were with at school or university. And many high civil servants have been sent abroad to study, acquiring not just new technical competence and perspective, but also democratic values.

Achieving Policy Consensus

Besides the FYPs and annual economic management plans, under Presidents Park and Chun, there were other mechanisms through which national consensus for economic policy was obtained and its implementation monitored. Three in particular are worth noting. One of them was the Monthly Economic Briefing held at the EPB. This meeting started out as an occasion for the EPB to report general economic trends to the President, but it soon acquired broader objectives. The President, all Ministers, and other senior figures attended this meeting. In addition, the heads of big business and financial organizations were invited. The briefing covered not only macroeconomic trends but also micro policy issues.

Consensus building was also achieved at the quarterly Trade Promotion Conference. At this meeting, attended by the President, Ministers, other high government officials, as well as the heads of virtually all large trading firms in the country, the Ministry of Trade and Industry (MTI) would provide reports not only on the progress towards achieving annual export targets, but also the problems and difficulties facing industries in meeting their export goals. As in the case of the Monthly Economic Briefing, the President made suggestions as to how problems might be handled. In addition, he used the meetings to recognize those individuals from the private sector, who had made outstanding contributions toward achieving export targets.

The third important mechanism took the form of annual meetings between the President and the senior officials of individual Ministries. In January or early February, every Ministry reported directly to the President on its plan of activities for the current year as well as its achievements over the previous one. After listening to the report, the President would comment on the past year's achievements and, if necessary, make changes to the plan for the current year. After attending such a meeting, a senior official was left in no doubt as to which direction the President wished him to lead his Ministry for the year.

It is often assumed that a strong President can achieve his aims merely by issuing orders. In fact, people need to be persuaded to work with the government for the good of the country. Presidents Park and Chun made use of almost every occasion to expound on their economic policies and underlying philosophies. In the case of President Chun, he felt that such efforts did not go far enough. Therefore, he instructed the EPB to launch what he called the Public Economic Education Program, focusing on such issues as the merits of price stability and the need to work with Korea's trading partners.

In spite of the many mechanisms for ensuring consistency of policies and coordination among different Ministries, it is worth emphasizing that the balance between micro investment planning and macroeconomic management was not always achieved. This has been particularly true when a certain policy or a group of projects is backed by the Office of the President, which has a limited staff but the power to overrule other Ministries including the EPB. One example was the HCI drive in the 1970s. As President Park believed in the urgency of undertaking and completing the HCI projects for national

security reasons,⁴² a Special Task Force was put under the direction of one of the Senior Secretaries to the President for Economic Affairs.⁴³

This Senior Secretary enjoyed virtually unlimited power to plan and execute HCI projects with little regard to the overall resource constraints of the economy. After he and his staff had designed various projects, the task of financing them was left to the MOF and the EPB.⁴⁴ Because the government had to complete many other projects, resources were greatly stretched and inflation accelerated. During 1973-78, the average annual rate of consumer price inflation shot up to 18 percent, from 13 percent in 1968-72. Similar experiences were repeated in 1990-91, when President Roh allowed his Senior Secretary for Economic Affairs to bypass the DPM on policy matters involving housing construction and aid to the former Soviet Union.

Rewards and Penalties

Korean civil servants are by no means well rewarded financially, particularly in terms of salaries. Until recently, the average monthly salary of civil servants was only 50-60 percent of what someone with equivalent education, training, and experience received in non-government sectors. However, until the early 1980s, civil servants were the only professionals in Korea who enjoyed the benefit of pensions after retirement. Those pensions, together with life-time job security, were significant incentives.

Nevertheless, the strongest incentive, particularly for high civil servants, has been the social respect which increases as they climb the ladder. This kind of non-pecuniary satisfaction reaches its peak when performance is recognized in the form of special citations, awards of honor, and personal appreciation by the heads of State. This was President Park's style.

Somebody who has served as a Minister in the government is usually recognized for his achievements for the remainder of his life. For instance, he is still addressed as a Minister, even years after leaving office. True to the Confucian tradition emphasizing the unity within a family, this kind of honor, which has been upheld for more than 500 years, is usually regarded as something to be shared by members of the entire family or clan. Partly for this reason, a family is often willing to give financial support to a promising young civil servant for many years.

Procedures for awards and punishments are not symmetrical in Korea, at least not on the surface. Although achievement is openly recognized, failure seldom seems to be penalized. This may be the legacy of the Confucian tradition in which members of the "yangban" class were seldom punished openly. In any event, in the Korean context perhaps the most effective penalty has been the social disgrace of being dismissed from the government for wrongdoing. It is probably this stigma which ensures that, unless an individual civil servant has done something extremely serious, all that is required of him is a discreet submission of a resignation.

⁴² In view of the growing tensions between the North and South, President Park strongly believed that through the development of HCI, Korea should acquire the capacity to produce important weapons within 2-3 years, instead of the 4-5 year minimum period that was thought required in the opinion of his advisors. See C. Kim, *op.cit.*, p. 323.

⁴³ For a very informative discussion on why and how the Special Task Force came into being, see C. Kim *op.cit.*, pp. 320-324.

⁴⁴ See the record of an interview with Mr. D.W. Nam, former Minister of Finance, Deputy Prime Minister, and Prime Minister, conducted by the authors.

This asymmetrical system of awards and penalties has certain consequences. Because achievements are explicitly recognized, individuals are strongly motivated to work hard and do well. Since wrongdoing and shortcomings are not severely punished, individuals are less fearful of failure. On balance, this can result in more policy innovations, thus increasing dynamism for the whole organization. However, when a policy goes seriously wrong, and few are held accountable, the cost tends to be shared by society as a whole.

Policy Research Institutes

For the most part, the Korean bureaucracy has been manned by generalists. This reflects the Confucian view that a person of superior intellect can handle almost any subject once he puts his mind to it. Partly because of this belief, Korean bureaucrats are seldom kept on one assignment for very long before being shifted to their next position. In addition, like their counterparts elsewhere, Korean bureaucrats have to devote their attention to immediate and short-term problems. To compensate for these weaknesses, several policy research institutes have been established to look at long-term issues based on special knowledge and expertise.

The first of them was the Korean Development Institute (KDI), established in 1971. The KDI's main function has been to help the EPB formulate medium and long-term economic policies. It has been manned principally by Ph.D level economists and other social scientists trained abroad.

Stimulated by the success of KDI, other Ministries have established institutes under their own umbrellas. Examples include the Korea Educational Development Institute (KEDI), founded by the Ministry of Education in 1972, the Korea Rural Economics Institution Institute (KREI), founded by the Ministry of Agriculture and Fishery in 1978, and the Korea Institute for Human Settlement (KIHS), established in 1978 by the Ministry of Construction. By 1992, there were at least ten such institutes in Korea.

Over the years these institutes have greatly enhanced the quality of policy-making in Korea. However, their contributions do not go unchallenged. In the opinion of some, the researchers have had too little experience of government, and as a result their policy recommendations have often been too theoretical and lack immediate applications. Such criticism is misplaced. After all, these institutes have been established precisely to offset the tendency of the government bureaucracy to focus only on immediate and short-term problems.⁴⁵

Business and Entrepreneurs

For many centuries, Korea was not a country in which entrepreneurship thrived. Due to the Confucian influence, merchants and businessmen were placed near the bottom of the social hierarchy. This tradition even survived through the period of Japanese occupation (1910-45).

During the three-year period of US military occupation following the end of World War II, this tradition began to change somewhat, especially after an extensive land reform was carried out. As the maximum amount of land a family could own was limited to three hectares, many landowners (who traditionally had been greatly honored) were forced to seek new ways of life in such fields as business. Nevertheless, the emergence of a business class was by no means complete on the eve of Korea's economic take-off in the 1960s.

⁴⁵ The most recent example of the long view is a project on Korea in the Year 2000, completed by a consortium of government funded research institutes under the coordination of KDI in 1988.

To be sure, some Korean businessmen had managed to become rich during the period of reconstruction following the Korean War. But they were all suspected of having made their money through illegal means, such as bribery. In response to the continuing popular prejudice against businessmen, President Park, shortly after coming power, arrested a large number of Korean businessmen, including the late founder of the Samsung Group, on charges of alleged accumulation of wealth through illegal means.

Ironically, President Park soon realized that he would need a large business class to perform entrepreneurial functions if he was to succeed in his development goals. So he set out to create just such a class, as will become clear later.

President Park created a business class in various ways. First, as has already been described, he offered many financial incentives to those who were deemed capable of doing what the government wanted.⁴⁶ Second, he awarded successful industrialists with special prizes and medals. This kind of recognition also served to enhance the prestige of businessmen in the eyes of the Korean people. And third, the government got closely involved with business itself.

It did so initially by sharing risks with private entrepreneurs. Because domestic savings were inadequate to finance investment, there was a need to attract foreign capital. Since few Korean businesses were strong enough to attract foreign loans on their own, the government provided the guarantees not only for the repayment of principal, but also for payments of interest. Over time, risk sharing between the government and businesses expanded into other areas.

One example has been Korea's construction activities in the Middle East. After the first oil shock, the government encouraged Korean construction companies to win contracts in oil producing countries in the Middle East. To help this happen, the government directed commercial banks to provide guarantees of performance. When some of the construction companies failed to fulfill contracts, the government had to ask other construction companies to take over the failing projects in return for a package of subsidized loans and special tax treatment.

The cooperative relationship between the government and private business has often taken an indirect form as well. When there was a need for the government to control the behavior of private firms in a given industry, it often did so through the industrial associations. What is remarkable about Korea's industrial associations is that so many of them have been created at the behest of the government rather than by the spontaneous desire of individual firms in the industry. Another remarkable aspect is that regardless of how a given association was created, almost all its executive positions have been filled by former government officials — a Korean equivalent of Japanese "descent from heaven." Former officials are of course useful as lobbyists vis-a-vis the government and as a convenient channel through which the government can exert its influence on the industries.

Characteristics of the Korean Firm

There are several features that distinguish Korean companies from their counterparts elsewhere. For the most part (and unsurprisingly), Korean firms have had a short history. Many are therefore still owned and operated by their founders. They rely heavily on family members or close relatives to manage their business, and are reluctant to seek the views of outsiders as well as of salaried managers. This explains why they can often take decisions rather quickly.

⁴⁶ For a fuller discussion of these incentives in the 1960s, see Krueger (1979), pp.92-98.

Korean entrepreneurs are also hard working and aggressive - qualities which can be readily explained by the great hardships and social upheaval that the Korean people underwent during the War. To foreign observers, Korean businessmen often care more about business expansion rather than profits. These traits can also be understood if one remembers that under the Confucian tradition, Korean entrepreneurs have more freedom to hire than to fire their workers. In fact, they behave in a very patriarchal and authoritarian manner. They feel they are responsible for the welfare of their employees. In this, they are following the Confucian tendency to regard all forms of organizations as nothing more than an extension of the family. In relation to the government, virtually all businessmen are highly cooperative, sometimes even subservient. This is not surprising if one bears in mind that many Korean businessmen owe their success to government support and encouragement; and, like the rest of society, they tend to regard policymakers and bureaucrats with great respect.

The Chaebol

Compared with other countries at similar stages of development, the average size of the Korean firm is quite large. Thirteen Korean firms were listed in the 1991 Fortune 500, compared with one each from Taiwan, Malaysia, and Thailand.⁴⁷ The large size of Korean firms is no accident. From the beginning, the Korean government felt that Korean firms could compete in the international market only if they were a certain minimum size. This view was reinforced when the government encouraged the development of heavy and chemical industries (HCI) in the 1970s to upgrade its export structure. The very nature of the HCI drive was capital intensive and involved a scale economy. This policy also meant that it was more convenient for the government to deal with a smaller number of firms. The result was the emergence of a handful of large conglomerates, commonly known as the Chaebol.

Other factors have also helped to produce the Chaebol. Since Korea began its industrialization with a highly underdeveloped equity market, industrialists had to rely heavily on bank loans - and most banks were owned by the government. When interest rates on bank loans were set below market clearing levels, demand for loans exceeded supply. It was therefore necessary for the government to ration loans by non-price mechanisms, which led to a concentration of economic power in a limited number of firms. Over time, loans were readily available only to those "strategic" industries favored by the government.

The government also promoted the growth of the Chaebol through its heavy involvement in certain investment decisions. When projects did badly, it had little choice but to get involved. It did so either by an outright bail-out or by asking another group with a sound financial base to take over the unsuccessful venture. Bailouts began in the 1969-70, when some of the firms whose foreign borrowing had been guaranteed by the government were in financial difficulties. In order to induce another business group to get involved, the government usually offered incentives in the form of new loans to be used as "seed money" and special tax treatment.

What are the consequences of this concentration of commercial power? On the positive side, conglomerates enhanced the synergy effect - what is sometimes called the economy of scope. In addition, the Chaebol not only acted as a marketing agent for small firms but also provided short-term financing for them. This support was particularly helpful in the early stages of economic development, when small firms ran into difficulties while exploring market potential abroad.

These positive contributions of the Chaebol need to be seen alongside some negative ones as well. When different firms or business units with different lines of specialties are combined together to form a Chaebol, initially the synergy effects are multiplied, and business risks are reduced. However,

⁴⁷ The Asian Wall Street Journal, September 24, 1992, S-18.

as the number of firms and units increases, profitable units have to be called on to subsidize inefficient and unprofitable ones (particularly through cross-holdings of equity). This tends to lock in resources to inefficient uses. In addition, the overall vulnerability of the group to business fluctuations increases. In the opinion of many, this is precisely the position which some Korean conglomerates have now reached.

Another consequence of the conglomerates is that, by preempting bank loans, they have prevented the healthy growth of small and medium industries. The absence of such a sector has been considered the weakest link in Korea's overall industrial structure, which is in sharp contrast to economies such as Japan and Taiwan (China).

Because of the preemptive effect of the Chaebol, the general public in Korea has looked unfavorably not only on the Chaebol, but also on the capitalist system as a whole. In the public's eyes, the emergence of the Chaebol is an inevitable result of capitalistic developments. In a country such as Korea, where capitalism has no deep cultural roots, a negative view of capitalism is extremely unfortunate for the Chaebol as well as the long-term growth prospects of the country.

State-Owned Enterprises

Although the Korean government never intended to develop its economy along the socialist path, in the 1960s and 1970s the weight of state enterprises in the Korean economy was comparable to that in countries such as India.⁴⁸ Due to the pragmatism of the Korean government, it was more than willing to ignore ideological quibbles when it judged that establishing state enterprises was the only feasible way to meet certain critical needs of the economy. Such needs arose often when Korea started its economic development, since it had only limited capital and management expertise in the private sector.

More than twenty major state enterprises were set up by the government between 1961 and 1976. They included Korea National Airlines, Inc. (1962), Korea Electric Power Company (1962), Korea Petroleum Company (1962), Korea Petroleum Development Corporation (1977), Korea Mining Promotion, Inc. (1967), Inchon Heavy Industries, Inc. (1963), Korea Shipbuilding Corporation (1968), and Pohang Iron and Steel Company (1968). In addition, the government established some special banks and financial institutions including Korea Small and Medium Industries Bank (1962), Korea National Citizens Bank (1963), Korea Reinsurance Corporation (1963), Korea Housing Bank (1967), Korea Exchange Bank (1967), Korea Development Bank (1969) and Korea Imports and Exports Bank (1976).

Given the establishment of so many state enterprises, the average annual growth of their output during 1963-72 was 14.5 percent, well above the 9.5 percent growth of GDP. The share of the total value added accounted for by state enterprises also rose, from 6.5 percent in the 1960s to 9.1 percent in the 1970s.⁴⁹

It should be noted that in the 1960s and 1970s, most state enterprises were created in areas where initial capital requirements were large, the gestation period of investment long and investment risks high — precisely the areas where private enterprises were either unable or unwilling (or both) to move into. In addition, new state enterprises had greater linkage effects on the economy than other enterprises. Furthermore, state enterprises accounted for no less than 30 percent of the total fixed investment of the economy during 1963-81. In other words, state enterprises not only filled the gap left by private enterprises but played a critical role in propelling the overall development of the economy.

⁴⁸ See Song (1989), pp.37-39.

⁴⁹ Ibid.

The Intangibles of Policy

It has become clear that both the government and the private sector have made valuable contributions to the success of Korea's growth over the past 30 years. One should keep in mind that several cultural and historical factors unique to Korea have also influenced the economy's development. We examine five of those in this section: (i) the role of Confucianism, (ii) the influence of Japan, (iii) the effect of the Korean War, (iv) the effect of the North-South division, and (v) the role and influence of the US in Korea's development.

Confucian Background

Confucianism was first introduced into Korea by the Yi Dynasty, founded in 1392. Although it ceased to be an official state creed in 1894, it has continued to influence Korean society to this day.

Confucianism insists on a strict discipline based on a social hierarchy, with the king or ruler at the apex. All subjects owe unlimited loyalty to the king, and all rights and privileges the subjects enjoy are regarded as gifts from the king. Below the king in status are teachers, who outrank parents. Children owe respect to teachers and obedience to parents. Other things being equal, men are considered as superior to women, and elders superior to youngsters. All these traditions have been conducive to the emergence of an authoritarian government in Korea.

The Confucian approach to the betterment of the world is through good government and education. The ideal government in the Confucian view is headed by a wise king supported by scholar-bureaucrats, who occupy the top position in society only below the king. Scholar-bureaucrats are to be recruited through rigorous and impartial examinations from among "superior men" who not only possess innate abilities but have successfully applied them to the learning and cultivation of character.

Below scholar-bureaucrats in the Confucian hierarchy are farmers. Artisans, who work with their hands to produce utensils and other artifacts needed in daily life, are placed below the farmers. Merchants and tradesmen are then below the artisans and are considered to be only slightly higher than butchers and shamans. This view of social hierarchy, together with the notion of "superior men", goes far towards explaining why Korea's economic development has been led by government rather than the private sector.

This tradition has brought many benefits to Korea, but it has also done some harm. Because Confucianism has little respect for merchants or the business class, it maintains a strong anti-business bias. In addition, the strong stress on family has tended to encourage nepotism in both government and business, while emphasis on personal loyalty has resulted in down-playing the need to govern society through law and order. Furthermore, the kind of education stressed in the Confucian tradition has had more to do with the development of personal character fit for public service rather than special knowledge and expertise in science and technology.

The Japanese Influence

For about 15 years after the end of World War II, anti-Japanese feeling was understandably very strong in Korea. Although most Koreans still have anti-Japanese sentiments, there is little question that Japan has had an enormous influence on Korea's economic development, particularly during the 1960s and 1970s. Many of the senior policymakers received much of their formal education under the Japanese system. Indeed, many had spent their formative years in Japan, internalizing Japanese values, such as respect for honesty and integrity.

The aspect these Korean policymakers admired most about contemporary Japan was its ability to industrialize through the adaptation of Western science and technology. As for Japanese history, they were most impressed with the Meiji era, when a handful of oligarchs successfully led Japan to achieve the mercantilistic goal of both "enriching the nation and strengthening arms." It is true that many Korean government leaders resented the Japanese oligarchs who colonized Korea; but these oligarchs also served as their role models.⁵⁰ The same was true of many Japanese institutions and approaches to economic development.⁵¹

The Legacy of the Korean War

The Korean War brought untold suffering on the Korean people, to say nothing of the physical destruction it caused. Ironically perhaps, this very destruction strengthened the determination of the Korean people to rebuild their nation.

The Korean War also caused people to free themselves of many culturally ingrained inhibitions including the choice of profession. Under the Confucian influence, Koreans had held a low opinion of careers in fields other than government service and teaching. After the War, attitudes changed, and people became more willing to accept careers in business and military service. In addition, the Korean War made almost everyone equally poor. This tended to destroy social barriers and increase social mobility.

The war also raised the quality of manpower. Many soldiers freshly recruited from rural areas did not have the education and skills to use modern military equipment. They were trained to acquire skills in areas such as the operation of engineering equipment and were taught to appreciate the value of teamwork and discipline. After military service, they were able to apply those skills and disciplines to their work in civilian life. Many officers, who had acquired managerial expertise during military service, were able to make a smooth transition to management positions in civilian life. And all Koreans realized that, despite the extensive loss of physical assets, they still possessed human capital — their least vulnerable asset to wartime destruction. This in turn greatly increased the demand for education. The wartime policy of the government, which gave students enrolled in colleges and universities deferment from military service, encouraged people to opt for higher education. Thanks to this policy, the number of students enrolled in colleges and universities increased dramatically during the war years.⁵²

For centuries the Korean people had suffered innumerable invasions by foreigners. As a result of this history, Koreans had more than their fair share of xenophobia. They tended to believe that foreigners were synonymous with people who would only harm Korea's interests. The Korean War proved that this was not necessarily the case. This time foreign soldiers had come to Korea, under the UN flag, to help Koreans repel their enemies. This new experience had an enormous impact on the Korean psyche. For the first time in their history, Koreans began to appreciate the fact that they could work together with foreigners for mutual gains. Without this revelation, Koreans would have had great

⁵⁰ It is very instructive to note that in naming Korea's new Constitution adopted in 1972, President Park used the term "Yushin," which happens to be the same terminology used by the Meiji Japanese oligarchs to characterize their reform policies.

⁵¹ It is also instructive to note in this connection that the organizational structure as well as the names of the Bureaus in the Ministry of Trade and Industry (MTI) in Korea are very similar to those of the Ministry of International Trade and Industry (MITI) in Japan.

⁵² See Y. Kim and McGinn (1980), pp. 106-107.

difficulty abandoning their centuries' old inward-looking orientation and adopting the outward-looking development strategy that they embraced so successfully in the early 1960s.

The North-South Division

Few developments in Korea over the past forty years or more can be understood without reference to the North-South division of the country. Because of this division, the security of the nation has been under constant threat. This fact alone goes far towards explaining the politics as well as the economics of the country. The ever-present threat from the North forced the country to pursue two goals simultaneously — increasing the wealth of the country and strengthening its arms. Put differently, Korea has forced Korea to produce both guns and butter for over 30 years.

Without the threat from the North, the military government under the leadership of General Park would probably not have come into being in 1961. Nor would so many Koreans have been willing to live under a series of authoritarian governments and sacrifice a great deal for rapid economic development. The urgency of sacrifice became all the greater in the 1960s when North Korea's GNP per capita was supposed to have exceeded that of the South. Because of this urgency, the time horizon of economic policymakers also became distorted. The value of any projects yielding long-term benefits often was discounted in favor of short-term gains.

The US Influence

Over the past 30 years or more, the United States has affected Korea's economic development in many ways. Given the geo-strategic importance of Korea, the US has maintained its military presence in Korea to ensure peace and stability on the peninsula. This has enabled Korea to devote a greater amount of resources to economic development than would otherwise have been possible. Even so, over the past three decades Korea has spent an average of 4-5 percent of its annual GNP on defense. It is worth recalling that whenever US resolve to defend Korea from an invasion from the North seems to waver, as happened during the early 1970s, Korea's economic policy has been immediately affected. The motivations behind the HCI drive in the 1970s can best be understood in this light.

Apart from providing basic security, the US contributed greatly to Korea's early economic development through its generous aid. Without such aid, recovery from the destruction of the Korean War would have taken much longer. It should be noted, however, that this aid allowed the US to influence Korean economic policy. After the completion of reconstruction in the late 1950s, US aid donors began to pressure Korea into adopting an outward-looking development strategy. In the late 1950s and early 1960s, US authorities made conscious use of their aid leverage to persuade Korean policymakers to adopt policy reforms on inflation, interest rates, the exchange rate, and tariffs as part of the efforts implementing the outward-looking strategy.

The US facilitated this strategy not only by making its markets available to Korea, but also by helping Korea exploit market opportunities in other Western nations. It sponsored Korea's membership of international organizations such as GATT, IMF, and the World Bank. Furthermore, many Koreans were given opportunities to study in the US either through US-funded scholarships or on their own initiative. Many promising young Korean policymakers were trained at various American universities and institutions under exchange programs financed by the US government.

These educational exchanges have undoubtedly helped Korea's drive towards economic development, but their effects should not be exaggerated. Apart from a few individuals, the beneficiaries of exchange programs did not reach positions of influence until the late 1970s. As already noted, many of those who played key roles in policy-making in the 1960s and 1970s were trained under the Japanese system.

IV. SUMMARY

Korea managed to turn its initial disadvantages into assets by pursuing a total dedication to exporting in the post-1961 period. Relying first on foreign aid, and later on rapidly increasing savings and external borrowing, and a vigorous pursuit of technology (in lieu of DFI), it was able to capitalize itself. When combined with a talented labor force that worked record hours, it produced a highly productive and rapidly growing economy.

Public policy was at the center of development, as stable governments, aided by technocratic bureaucracies and research institutes prodded the private sector to attain national export objectives. In addition to managing the macroeconomy, the government created state enterprises when needed; and intervened in credit allocation to promote exports in the first instance, and selected industries in the HCI period. The trade regime was schizophrenic, with a pro-export bias, as reflected in trade preferences and an aggressive real effective exchange rate policy, combined with import protection. Following the second oil shock, selective industrial policy was abandoned, trade reform began, and the banks were privatized. Much of the 1980s has involved the dismantling of controls on trade, direct foreign investment, gradually on equital flows and a reexamination in the 1990s of the role of government.

Korea is rightly held as perhaps the most successful NIC and its experience is examined for replicable lessons. The paper argues that Korea did very well on the economic fundamentals; the government pursued sound macroeconomic management, invested in infrastructure and human resources and supported an outward-oriented private sector. When industrial intervention was tried in the 1973-79 period, it always had exporting as its final objective. Korea has a good record of developing infant industries. Nevertheless, the evidence is still mixed as to whether the HCI drive was necessary to maintain economic success. Costs and benefits are noted.

What Korea also had in abundance was excellent policymaking and policy implementation, based on strong presidential leadership and political stability. Social consensus and strong national identity, when combined with pro-equity policies (inland reform and rural investments) served to maintain social stability despite rapid economic change. Korea is a case where government clearly took the lead in development — strategy and implementation — and where it was highly successful.

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