

WIDER

STABILIZATION AND ADJUSTMENT
POLICIES AND PROGRAMMES

COUNTRY STUDY

14

REPUBLIC OF KOREA

ALICE H. AMSDEN

WORLD INSTITUTE FOR DEVELOPMENT ECONOMICS RESEARCH OF THE UNITED NATIONS UNIVERSITY

STABILIZATION AND ADJUSTMENT
POLICIES AND PROGRAMMES

RESEARCH ADVISERS: Professors Lance Taylor
and G K Helleiner

COUNTRY STUDY: **REPUBLIC OF KOREA**

Author: Alice H. Amsden
Harvard Graduate School
of Business
Boston, USA

WORLD INSTITUTE FOR DEVELOPMENT ECONOMICS RESEARCH

Lal Jayawardena, Director

The Board of WIDER:

Saburo Okita, Chairman

Abdlatif Y. Al-Hamad

Bernard Chidzero

Mahbub ul Haq

Albert O. Hirschman

Lal Jayawardena (ex officio)

Reimut Jochimsen

Pentti Kouri

Carmen Miro

I. G. Patel

Soedjatmoko (ex officio)

Janez Stanovnik

(WIDER) was established in 1984 and started work in Helsinki in the spring of 1985. The principal purpose of the Institute is to help identify and meet the need for policy-oriented socio-economic research on pressing global and development problems and their inter-relationships. The establishment and location of WIDER in Helsinki have been made possible by a generous financial contribution from the Government of Finland.

The work of WIDER is carried out by staff researchers and visiting scholars and through networks of collaborating institutions and scholars in various parts of the world.

WIDER's research projects are grouped into three main themes:

- I. Hunger and poverty - the poorest billion
- II. Money, finance and trade - reform for world development
- III. Development and technological transformation - the management of change

WIDER seeks to involve policy makers from developing countries in its research efforts and to draw specific policy lessons from the research results. The Institute continues to build up its research capacity in Helsinki and to develop closer contacts with other research institutions around the world.

In addition to its scholarly publications, WIDER issues short, non-technical reports aimed at policy makers and their advisers in both developed and developing countries. WIDER will also publish a series of study group reports on the basic problems of the global economy.

TABLE OF CONTENTS

	<u>Page</u>
PREFACE BY THE DIRECTOR	
EXECUTIVE SUMMARY	
INTRODUCTION	1
1. THE FORMATIVE PERIOD: THE FIRST TWO FIVE YEAR PLANS, 1962-71	2
Debt Financing	8
The First Stabilization	10
2. THE RISE OF HEAVY INDUSTRY, 1972-78	12
The First Energy Crisis	15
Exports and the Textile Industry	17
Inflation	19
3. THE COMPREHENSIVE STABILIZATION PLAN, APRIL 1979	24
Productivity in the Nonfarm Sector	25
The External Balance	27
Inflation	28
Monetary Policy	29
Labor Reserves	31
Savings, Investment and Government Spending	31
Distribution Effects	35
A. Agriculture	35
B. The Size Distribution of Income and Poverty	36
C. The Functional Distribution of Income	37
4. STRUCTURAL CHANGE	38
a. Industrial Licenses and Credit	40
b. Monopoly	41
c. Small and Medium Size Firms	42
d. The Textiles Industry	42
e. Trade Policy	43
FOOTNOTES	47
BIBLIOGRAPHY	49
FIGURES	55
TABLES	56

PREFACE BY THE DIRECTOR

This monograph is part of a series being published by WIDER on the experience of developing countries with stabilization and adjustment programmes in the 1970s and 1980s. Each study analyzes the package of policies implemented by a specific country; its relations with the IMF and World Bank; the effects of the policies on production, employment, the balance of payments and social welfare; and what other policies might have been followed instead.

The intention of the series is to assist developing countries to devise adjustment policies that would, while accomplishing desirable adjustment and growth objectives, simultaneously remain politically viable in the particular country settings studied.

For this purpose it was thought desirable to explore policy alternatives to the adjustment programmes being implemented. Built into the design of the series, therefore - and constituting indeed its special feature - is the requirement that each study include a 'counterfactual' exercise to illustrate the effects of alternative policies. Utilizing econometric models adapted or specifically developed for each country, the probable effects of alternative policy packages are estimated; the object was to see how far the balance-of-payments adjustment and growth goals of a particular programme might have been achieved at a possibly lower social cost with a different policy mix.

Each country study is written by an independent scholar and expert in the relevant country. First drafts of the studies in this series were discussed at the WIDER conference on stabilization and adjustment policies in developing countries which was held 19-22 August, 1986 in Helsinki. Each study has been reviewed by WIDER's research advisers for the project, Professors Gerry Helleiner and Lance Taylor, and revised substantively by the author as necessary; subsequent editing has been conducted under the overall supervision of Mr Robert Pringle, Senior Fellow, who serves also as editorial adviser on WIDER publications.

A companion volume by Professor Taylor summarizing the experience of the countries surveyed will draw broader implications for the theory and practice of stabilization and adjustment policies; this volume will be published by Oxford University Press. The individual country studies in this series will subsequently be grouped into separate volumes, also for eventual publication by Oxford University Press.

Lal Jayawardena
Director
March 1987

EXECUTIVE SUMMARY

The Republic of Korea's growth rate averaged nearly 6 per cent in 1981-85, jumping to 10-12 per cent a year in 1986-87. Inflation was cut from 26 per cent in 1980 to around 3 per cent in mid-1987.

The author of the following monograph, Dr Alice Amsden, argues that much of the recovery in growth and in inflation had to do with the structural soundness of the industrialization effort of the 1970s. Another large part had to do with exogenous factors - the world economic recovery and an improvement in Korea's terms of trade (at a time when the terms of trade of other industrializing countries continued to deteriorate). The role played by macroeconomic policy was initially much the same as in the past - driving away recession with expansionary measures and devaluation to spur exports.

Rising productivity was the critical factor. Part of the productivity rise went for increases in real wages, which contained social unrest, and part went for a lower growth rate of unit labour costs. An improved cost position helped firms to export, thereby necessitating a lower devaluation of the currency than otherwise.

In 1983, however, at a time when price increases in Korea were already well below historical levels, the government, in concert with the IMF, tightened the fiscal and monetary screws. The stated objective was to prepare the macroeconomic environment for the comprehensive programme of economic liberalization that was just getting underway.

The successes of this tightening were threefold. First, long term debt as a per cent of total debt rose sharply. Second, savings as a per cent of GNP rose from 23 per cent in 1982 to 28 per cent in 1984. The current account deficit, therefore, was unusually low in 1984. Third, inflation was eliminated.

Dr Amsden argues that the case for sweeping economic liberalization cannot be based on an impartial reading of Korean economic history. Direct intervention and subsidies have always played a crucial role in economic policy. In conjunction with a highly politicized process of industrial licensing and long-term credit allocation, subsidies have been used to guide economic behaviour, export targeting providing the government with a device to discipline subsidy recipients, (a device absent in so many other countries where subsidies are also king). It is true that Korea has relied on foreign markets to absorb its exports, and it has also used the market mechanism under certain conditions to discipline firms. But it has never embraced the market mechanism as a rule of thumb.

Introduction

The Republic of Korea (hereinafter Korea) experienced what is tantamount to an industrial revolution since launching its first Five Year Development Plan in 1962. Growth, however, has been interrupted by internal and external shocks. This paper is organized chronologically. Discussion of Korea's long run growth and industrialization history is interrupted intermittently to examine its stabilization exercises. The account builds to the stabilization exercise of 1979-84. Stabilization policies in 1979-82 were similar to earlier responses to shocks. The deflationary medicine that was administered in 1983-84, however, was unusually and inexplicably severe. Moreover, the Comprehensive Stabilization Plan (CSP) of 1979 had a structural component, which is still in the process of being implemented, that calls for major institutional changes. The economic architects of the CSP argue that investments in heavy industry in the 1970s, based on a highly interventionist process of resource allocation, brought Korea to the brink of disaster. To retreat from the precipice, they advocate liberalization of markets.

This paper argues that a case for liberalization cannot be based on an impartial reading of Korean economic history. The evidence supports the view that both in the 1960s and 1970s, government intervention underscored the emergence of a solid industrial structure. Despite massive industrialization, the debt/GNP ratio fell, from 34% in 1972 to 32% in 1979. The much exaggerated and unsubstantiated "excesses" associated with heavy industry---far fewer in number, to all appearances, than those

experienced by Japan in the 1950s and 1960s---were fairly easily rectified by administrative fiat. With a solid industrial structure, Korea could rapidly resume expanding after economic downturns, usually through a resurgence of exports, having borrowed its way out of balance of payments difficulties to sustain fast growth.

One of the major alleged consequences of government intervention during the Big Push of the 1970s was high aggregate economic concentration. Yet the numbers suggest that aggregate economic concentration became high principally during the tenure of the CSP, often as a direct consequence of stabilization and liberalization measures.

As for liberalization, by the beginning of 1987 it could at most be described as "controlled". The sketchy evidence available suggests that in the areas of industrial licensing and importing, the new liberalization regime shares much in common with that of Japan. In the area of banking, indirect government controls persist. In any event, the theory behind the liberalization of banking to achieve greater equity and efficiency may make little sense in the presence of large concentrations of private economic power. The only effective way to curb abuses of such power may be through a democratization of the overall political process.

1. The Formative Period: The First Two Five Year Plans, 1962-71

The assumption of power by President Park Chung Hee in a military coup represented a turning point in Korea's history. Park reoriented economic activity away from 'buying cheap and selling dear' towards capital accumulation. The major policies and institutions of the Park regime (1962-79) will be introduced briefly.

One, in keeping with tradition, heavy emphasis was placed on education. In international comparisons that correlate investments in education with income per capita, Korea emerged early on as a commendable outlier. Table 1 compares indicators of education in Argentina, Brazil, India, Mexico, and Korea. By almost all criteria--for example, engineers and scientists per million people---Korea excels by a wide margin. Among other effects, a highly educated population made rapid diversification into new industries easier and necessitated less reliance on direct foreign investment for technical knowhow. Table 1 indicates that direct foreign investment as a percentage of GDP was much lower in Korea than in the Latin American newly industrializing countries.

Two, as in Japan, agriculture was reformed (1949), protected from foreign competition, and provided with price supports. During the 1970s, even as investments poured into heavy industry, there was a transfer of resources from manufacturing to agriculture such that land productivity became among the highest in the world and farm and nonfarm household income became approximately equal. The major effects of agricultural policies were to allow industrialization to proceed without food bottlenecks and without political challenge from the countryside, on the basis of a fairly equitable size distribution of income.

Agriculture was the major source of the unlimited labor supply that characterized industrialization up until the late 1970s. The Park regime's labor policy, which is still intact, featured a ban on strikes and barriers to free trade union organization. State controlled trade unions have covered at most 20% of the labor force, primarily in the textiles, metalworking, and chemical sectors. Government-appointed labor leaders have not been coopted into the governing elite with high ranking positions

and pay. Instead, the emphasis has been placed on repression. Labor issues are handled by the Administration of Labor Affairs, which reports directly to the Korea Central Intelligence Agency (Choi, 1983).

Government appointees have represented labor's interests in negotiations for wages. Vague wage guidelines for both white and blue collar workers have been specified by the government as well as by the Federation of Korean Industries (FKI), which is dominated by the chaebol, and the Federation of Korean Trade Unions (FKTU), a creature of the government. About one-third of the average wage is accounted for by bonuses and overtime. Seniority pay for firm-specific service is the rule. By world standards, Korea has the highest inter-manufacturing industry wage dispersion and the widest gap in gross wages between the sexes (Krueger and Summers, 1986; Joung Woo Lee, 1983). Underlying the rapid rise in real wages beginning around 1965 was the preening of a labor aristocracy: male, employed by the chaebol, in the new heavy industries. At the opposite end of the spectrum is the economically active population in the informal sector. Estimated to number from one-half to two-thirds as many people as the formal sector, wages in the informal sector in the 1970s were believed to average about 20% less than wages in one of the lowest paid modern industries, textiles (Bai, 1982; Lindauer, 1984).

Thus, while income distribution in Korea is quite equitable by less developed country standards, wage distribution is quite inequitable. It is also unclear just how equitable income distribution would be if statistical coverage of the informal sector was better (Bhalla, 1979).

It is in the textiles industry that trade union organization is highest and it is among women in the textiles industry and the informal sector that labor unrest has been greatest. The liberalization called for

in the 1979 Comprehensive Stabilization Plan, however, does not include lifting the Park regime's ban on strikes or removing barriers to trade union organization. Instead, liberalization in the name of equity has focused on government control of credit and neglect of the small scale firm. The plight of the lowest paid worker is being addressed in a manner ideologically uncharacteristic of the architects of the CSP - with minimum wage legislation.

The central pillar of the Park regime's strategy of rapid industrialization was credit control. Although private firms were free in theory to borrow abroad, they could only do so in practice with government approval. Raising capital abroad was contingent on loan guarantees, which the government gave only to loans of which it approved. Private ownership of domestic financial institutions was altogether prohibited.

Government control of credit differentiated Korean and Japanese development. The Japanese zaibatsu owned their own banks whereas the Korean chaebol did not. Although there is no bureaucracy in Korea as pivotal as the Ministry of International Trade and Industry (MITI) in Japan, there has been less need for one. Direction of the economy under the Park regime was more centralized than in Japan because power over the purse was more centralized.

The initiative to borrow could be taken by either the government or the private sector. In the latter case, the first hurdle was project approval by the Economic Planning Board (EPB), the bureaucracy responsible for targeting specific sectors for development. From the late 1960s up until 1979, the EPB was headed by Nam Duck Woo, who became leader of the "Expansionist" school. If the private applicant had political connections and a project that complemented the EPB's own aims, credit would be

arranged by the Ministry of Finance. If the government took the initiative, it would identify a private firm to own and manage the project in question. Public enterprise in the manufacturing sector has been rare, limited in the 1970s to steel, oil refining and metals.

The EPB's licensing policy was highly risk averse. The firms that had already proved themselves tended to be the firms that were awarded licenses to enter new industries. This was the genesis of the diversified business groups.

Another pillar of the Park regime's fast growth strategy was export promotion. Credit was used both to subsidize and to coerce exports. Credit could be withheld to discipline firms that consistently missed their export targets, which were set by firms themselves with government guidance. A link between subsidies and exports in Korea gave government intervention a unique character. Sure enough, almost all governments in developing countries offer the private sector a battery of incentives to stimulate industrial activity. But few governments monitor and control the outcome of subsidies, which is the function the export targeting system in Korea provide (Amsden, in process).

The economic activity in the 1950s that contributed to development focused on light manufactures, particularly textiles, and especially spinning and weaving. The spinning and weaving subbranch of textiles accounted for as much as 21% of manufacturing output in 1954, with wearing apparel accounting for another 7% (KDB, 1984). By 1957, textiles had achieved enough import substitution to induce the government to prohibit their import (Yung Bong Kim, 1980). Industry in general, however, experienced a recession during the period from 1958 to 1961, and the textiles industry in particular showed a real decrease in production. The

military government of Park that seized control in 1961 responded to the crisis, and to the powerful Spinners' and Weavers' Association, with export subsidies.

Regardless of industry or firm, exporters were granted unrestricted and tariff-free access to the imported intermediate inputs they needed in export production. All exporters were also granted automatic access to bank loans for the working capital they needed for export activity.¹ Temporary overvaluation of the won was compensated for in part by preferential interest rates. Between 1965 and 1970, the real exchange rate without export subsidies showed considerable fluctuation, but the rate with subsidies was more stable (Kreuger, 1979; Frank, Kim and Westphal, 1975).

Despite the fillip to exporting provided by market determined prices of imported intermediate inputs, coercion played an important role in determining export volume. Thus, the role that the market mechanism played in stimulating exports should be understood in the context of a high degree of coerciveness. The pressure to export may be gauged from the survey response of exporters to the question: what has been the effect of export targets fixed for your firm? As Table 2 indicates, in 1976 35% of respondents said the effect of export targets on their firm was positive, 10% said targets had no effect, and as many as 53% said their effect was negative (Yung Whee Rhee, Ross-Larson, and Pursell, 1984).

Korea's tariff system was characterized by dualism. Imported intermediate inputs could be obtained duty-free but industries targeted for development were granted tariff protection. They were then pressured to begin exporting at once.²

State control of credit and intense pressures to export were key to capital accumulation in Korea. Credit control was the major device to discipline firms to invest in productive activities, to eschew capital flight, and to earn foreign exchange. Exporting, rather than a competitive market structure or competing against imports, stimulated efficiency and allowed scale economies to be realized as industrialization progressed from light to heavy industry.

Between 1962 and 1971, the real growth rate of exports was phenomenal, averaging 37% (Table 3). Exports as a percent of GNP rose from less than 3% in the 1950s to 15% in 1969. By the 1980s the export share was about 35% (EPB, 1984). Nevertheless, free access to imported intermediates had two side effects. It hurt small and medium size firms that might have produced those intermediate imports with relatively minor scale economies. This retarded Korea's subcontracting system and was the root of the problem surrounding small and medium size firms that surfaced in the late 1970s. Exporting also helped the growth rate of output more than the current account, necessitating higher foreign credit than otherwise.

Debt Financing

Korea has used foreign credit for two purposes. To finance its long term investments and to borrow its way out of balance of payments crises in order to maintain its long term growth trend. Korea's external debt position from 1961 to 1983 is shown in Table 4.

The foreign debt/GNP ratio rose rapidly throughout the period of the first two Five Year Plans. In 1962, the Foreign Capital Inducement Law was amended to provide guarantees that eliminated the risks of default and

exchange rate depreciation. The foreign debt/GNP ratio rose from 2.5% in 1962 to 6.8% in 1965. In September 1965, a monetary reform was undertaken in which deposit and lending rates at banking institutions were more than doubled, increasing the attractiveness of lending to Korea. The foreign debt/GNP ratio rose from 6.8% in 1965 to 13.6% in 1967. Then it more than doubled in four years, reaching 30% in 1971.

Among other effects of the monetary reform, Korean borrowers were encouraged by the cost differentials between domestic and foreign interest rates. The divergence between domestic and foreign borrowing rates ranged from 4.4 to 18 percentage points during 1965-70 (Yung Chul Park, 1985). The real private cost of borrowing abroad was typically negative (Table 5). Investment as a share of GNP, therefore, rose from 15% in 1965 to 30% in 1969. The share of savings rose at a faster rate as income expanded and domestic interest rates increased, but reached a lower level in the same time period, 23% in 1969 (Table 6).

No strict limits on either the quantity or purpose of foreign borrowing were enforced by the government and the rapid increase in debt service obligations resulted in a sharp rise in the debt service ratio, export growth notwithstanding. The debt service ratio (as a percent of merchandise exports) rose from 14% in 1969 to 28% in 1970 (Table 4). It was, therefore, in the period 1966-71 and later in two stabilization periods that the big build-up of foreign debt occurred, not as a consequence of government investment in heavy industry. Foreign debt in 1966-71 was used to finance exports, imports of capital goods in the light manufacturing sector, the beginning of import-substitution in heavy industry (fertilizers and cement), and investments in infrastructure (the

share in GNP of transportation and communications and of electricity, gas, and water more than doubled between 1964 and 1970) (EPB, 1984).

The First Stabilization

The increase in the debt service ratio prompted the IMF, in a standby agreement, to require the Korean government to issue a letter of intent to limit foreign capital movements to one to three year loans (very long term loans were also given liberal treatment) (Frank, Kim, and Westphal, 1975). Consequently, the growth of foreign debt slowed by 25% and 30% in 1970 and 1971 respectively and investment fell. There was also a lull in the growth rate of exports, stability in the real effective exchange rate notwithstanding. Whereas the real growth rate of exports averaged 36% in 1968-69, it averaged only 27% in 1970-71. Simultaneously, there was a sharp contraction in monetary expansion (Table 7). The growth rate of M2 declined from 61% in 1969 to 27% in 1970. All these factors contributed to a decrease in the growth rate of GNP---from 13.8% in 1969 to 7.6% in 1970 (Table 8).

To stimulate exports, the government introduced a maxi-devaluation in 1971 of 12%. The immediate effect was a sharp increase in the won cost of debt financing. This created severe short term financial problems for firms that had borrowed abroad. Rather than allow troubled enterprises to go bankrupt (and the borrowers tended to be the more progressive as well as politically best-connected firms), the government bailed them out.

The bail out was specified in a Presidential Emergency Decree announced on August 3, 1972. The 8/3/72 Decree had two immediate objectives: to revive economic activity by stimulating investment demand;

and to relieve the interest burden of overextended firms (Cole and Park, 1983). To stimulate investment, the government reduced overall interest rates of banking institutions. The time deposit rate was lowered from 17.4% to 12.6% and the rate on loans up to one year fell from 19% to 15.5%. To alleviate the interest burden of overextended companies, the government redistributed income from lenders to borrowers in the unofficial capital market, or curb market. As of August 2, 1972, all loan agreements between licensed business firms and lenders in the curb market were nullified and replaced by new agreements. Borrowers were to repay their informal loans over a five-year period after a three-year period of grace, carrying a 1.35% monthly interest rate. Alternatively, lenders had the option to switch their loans into shares of the borrowing firms.

By 1973, the economy was more than back on track. GNP recorded an unprecedented increase of 14.1%. The main factor behind the recovery was exports. They grew by an astounding 73%.

The stabilization of 1971-72, unlike the two stabilizations that followed it, was not triggered by an external shock. Rather, it was precipitated by the IMF's concern about Korea's debt buildup and credit worthiness. Consequently, it differed from succeeding stabilizations in that it did not involve a sharp increase in foreign borrowing. Nevertheless, three characteristics of the 1971-72 stabilization were later to repeat themselves: a maxi-devaluation, a cut in domestic interest rates, and the bailout of financially troubled firms.

Although maxi-devaluations came to characterize later stabilizations, the maxi-devaluation of 1971 was unusual insofar as it led to a year-on-year depreciation of the real effective exchange rate, which depreciated still further in 1972 and 1973. The GNP deflator in 1972,

16.4%, was higher than in any preceding year during the Park regime. Therefore, while informal price controls had been in effect throughout the 1960s, the 8/3/72 Decree called for an across-the-board price freeze, in emulation of the Nixon price freeze of a year earlier. After the freeze was lifted, less blanket controls over prices remained in effect and in 1975, their declared purpose became to restrain monopoly power.

The price controls in effect for the remainder of the 1970s, and into the tenure of the CSP---in practice if not in principle---gave the government discretionary power over the prices of a wide range of commodities that allegedly affected the life of the people. Firms were prohibited from exceeding price ceilings, which were determined by the EPB on the basis of firms' costs plus a markup. Apart from agriculture, price controls covered commodities such as steel, petrochemicals, cement, kraft paper, synthetic fibers, pharmaceuticals, as well as consumer durables such as TVs and cars. The prices of electricity and oil were designed to subsidize firms at the expense of households. The price of gas for non-commercial use was more than three times higher than in the U.S. while the price of diesel fuel was only one-third as great. By international standards, electricity for households was expensive but for firms, it was unusually cheap.

2. The Rise of Heavy Industry, 1972-78

From the commencement of the third Five Year Plan, in 1972, to the year preceding the second oil price rise, 1978, the growth rate of GNP averaged 8.9%. The depressing effects of the first energy crisis of 1974-75 notwithstanding, this growth rate of GNP was only slightly below that of the previous period, 9.5%. What distinguishes the decade of the

Big Push into heavy industry, however, is the behavior of the debt/GNP ratio. Despite massive industrialization, it remained virtually constant, even declining slightly, from 34.0% in 1972 to 30% in 1978. In 1979, the last year of the Big Push, it was only 32%. The debt service ratio fell between 1972 and 1979 from 24.4% to 18% (see Table 4). This casts the turn to heavy industry in a different light from the usually negative one. Insofar as foreign credit was the means by which the Korean economy chose to reproduce itself, it is significant that the debt/GNP ratio stayed constant during the Big Push. High productivity and an aggressive macro policy were at work that successfully pulled up the investment rate, increased domestic saving and pushed out exports at an average annual rate of 31%, although the world economy was far less supportive than in the 1960s. Investment increased from 22% of GNP in 1972 to 31% of GNP in 1978. The savings ratio rose in the same period from 18% to 29%.

The shift in the industrial structure, away from light to heavy manufactures, stimulated both investment and exporting. The share of heavy manufactures in manufacturing output rose from 40% in 1972 to 53% in 1978, and then to 62% in 1984. Heavy manufactures accounted for 21% of commodity exports in 1972 and 33% in 1978, up to 60% in 1984 (see Table 9). The achievement of a balance across branches within the heavy industry sector is suggested by Table 10. Table 10 shows the unit import content of a unit of final demand of investments and exports, which remained fairly stable between 1973 and 1980. Apparently, import substitution in heavy industry did not suck in imports.

Three premises guided the penetration into heavy industry: achieving scale economies through exporting; acquiring large doses of high grade foreign technical assistance from Europe, the U.S., and especially

Japan; and assimilating knowhow rapidly through a policy that awarded licences to enter new industries to a small nucleus of large diversified business groups. By the end of the 1970s, the world's largest cement mill was located in Korea, and Korea had become the third largest cement exporting country. The location of the world's largest shipyard was also in Korea, and between 1974 and 1984 Korea's share of international shipbuilding rose from nil to 20%. Korea's integrated steel mill was one of the world's most profitable, least subsidized, and lowest cost suppliers, and had begun to capture a sizeable market share in crude steel not only in the U.S. but also in Japan (PaineWebber, 1985).

The core of heavy industry, steelmaking, absorbed 40% of all loans to the heavy industry sector in the period 1975-1982 (Yung Chul Park, 1985). The integrated steel mill was the single most costly investment project, amounting to \$3.6 billion, and deviated from the pattern of other large scale projects insofar as the state retained both ownership and control. By contrast, for Korea's mammoth new shipyard, for example, the government bypassed a state-owned enterprise with longstanding experience in building small vessels and instead licensed the Hyundai group, Korea's largest chaebol, which transferred the experience it had gained in large scale civil engineering projects to shipbuilding, and used shipbuilding as a spring board to diversify into offshore structures, steel structures, heavy machinery, electrical equipment, and merchant shipping. Hyundai's total capabilities helped it to enter the Middle Eastern market, first as a simple construction contractor and then, as demand declined for the most labor-intensive construction work, as an engineering contractor for more technology-intensive projects and industrial plants.

Korea's mode of entry into the Middle Eastern construction market, which started in 1975, was unique among countries insofar as it involved collective contract migration (Soogang Kim, 1982). Instead of independent migration by each factor of production, migration occurred under the auspices of an enterprise which took along its equipment, intermediate inputs, managers and workers, usually providing turn-key services. Common work norms increased productivity and packaged exports improved delivery times and the balance of payments. As construction service exports to the Middle East increased, merchandise exports to the Middle East increased in tandem (Table 11). The government ruled that 80% of wages earned in overseas construction projects had to be received in the Republic of Korea. By 1978, the remittances of workers alone as a share of commodity exports equalled 5%.

The First Energy Crisis

Steel had just begun to pour and the first very large crude carrier had just begun to be constructed when the price of oil began to rise very sharply. The first oil crisis presented a severe threat to growth because the economy was wholly dependent on oil imports, had recently diversified into energy-intensive industries, and was highly vulnerable to fluctuations in world demand. The oil price increase caused a 26% deterioration in the terms of trade.

The government responded in January 1974 with measures to maintain overall growth. A policy decision was taken to absorb fully the oil price increase, which contributed in 1974 to a 62% rise in imports (EPB, 1984). Domestic credit was expanded by over 40%. Investment as a share of GNP increased from 26% to 32% between 1973 and 1974 while the

savings ratio declined by three and one half percentage points. The current account deficit jumped by a factor of five to 11%, an historical high, despite a growth in exports of 16%. To finance the deficit, the government both depleted its foreign reserve holdings, which fell by 3.5 percent in a year, and borrowed abroad. Between 1973 and 1974, Korea's total foreign debt rose by 42%.

A policy of selective price controls continued in effect. Prior restraint was abolished on all but 32 items, and for these products, price increases of 21.5% over November 15, 1974 prices were allowed (Jones and Sakong, 1980). In 1974, the Wholesale Price Index rose by 42%. To shore the current account deterioration, heavy taxes were imposed on oil products to deter their use, the predeposit requirement for imports was raised, more export credit with a lower interest rate was made available, and, towards the end of 1974, the exchange rate was devalued by 22% (although the real effective exchange rate remained almost unchanged in 1974 and 1975).

In 1975, the ratio of the current account deficit to GNP declined to 9.0%. Investment and savings as a share of GNP both declined slightly. The growth rate of exports declined to 1.4%, as the world economy contracted. The growth rate of imports, however, declined by a factor of ten by comparison with 1974, as imports of capital goods grew by only 3.2%. Once again, the country incurred foreign debt. Total debt as a percent of GNP rose from 32% in 1974 to 40% in 1975. Long term debt as a percent of total debt declined from 79% to 71.5% (Table 4).

In both 1973 and 1974, foreign loans as a percent of total capital inflow was lower than usual because of a temporary surge in direct foreign investment. In 1973 and 1974, direct foreign investment in total capital inflow averaged 14.8%, compared with 7% for the period 1964-72 and

4.3% for the period 1975-83 (Table App.1). With respect to loans, in 1974 and 1975, commercial loans grew in importance relative to public loans. This differed from the borrowing behavior of the preceding stabilization in 1971-72 and the succeeding one in 1979-82.

The country reaped the rewards of borrowing and running down its reserves in the form of positive growth - 7.7% in 1974 and 6.9% in 1975 - at a time when most other non-oil producing countries were plunged into depression. By 1976, fast growth had resumed and GNP grew by 14.1%. Although investment as a share of GNP declined, exports grew by 49.2%. Nevertheless, the growth rate of exports underwent a structural change after the first energy crisis. It never regained the heady levels it had enjoyed from the mid 1960s up to and including 1973. This was partly a function of the changing international environment, partly a consequence of the demand swings to which heavy manufactures are typically subject, and partly the result of the decline of light industry.

Exports and the Textile Industry

The growth rate of exports after the first energy crisis reached its high of 49.2% in 1976. It was less than half as much in 1977 and 1978, and much lower thereafter. The decline in the growth rate of exports between 1976 and 1977 was precipitous, although the index of the real effective exchange rate remained almost constant, even depreciating slightly: 103.4, 103.9, and 101.0 in 1976, 1977, and 1978 respectively (Table 3). Instead, one major factor behind the deterioration in export performance was the decline in the growth rate of textiles exports (including apparel), which accounted for about 30% of total commodity exports and over 60% of exports of light manufactures (Table 12).

The real growth rate of textiles exports fell from 55% in 1976 to 1% in 1977, and then fluctuated around a declining trend. While the growth rate of total commodity exports may have been slower than otherwise because most heavy industries with potential to export were still in their infancy, exports of producer goods can be expected never to perform as well for developing countries as exports of non-durable consumer goods, if only because demand for them is far less stable. In 1977 and 1978, exports (including invisibles) were buoyed by ships, services to the Middle East, and related commodity exports. Commodity exports to the Middle East grew at an average annual rate of 120% between 1977 and 1983, which raised that region's share in Korea's total commodity exports to 9% (Table 11). Later, this export flow as well as exports of construction services and ships collapsed.

Between 1976 and 1978, heavy industries and related social overhead projects received the lion's share of investment resources. Nevertheless, heavy industry did not crowd out the textiles industry in the queue for credit, which might otherwise explain its decline. The loan to value added ratio in the textiles industry exceeded the all manufacturing average in 1974-79 by 1.2 and in 1980-82 by 1.1, having only equalled it in 1971-73, before investments in heavy industry accelerated (Wontack Hong and Yung Chul Park, 1986).

Above average credit, however, went hand-in-hand with below average growth in the textiles industry's ratio of fixed assets per worker. Between 1971 and 1982, fixed assets per worker grew at an average annual rate of 8.1% in all manufacturing but only by 70% as much in the textiles industry. Moreover, despite faster wage increases in the textiles industry in Korea than in its major competitors, and despite equality from the

threat of protection, the introduction of new technology lagged behind in Korea. In 1975, the ratio of open end rotors (the new spinning technology) to ring spindles (the old technology) was 5% in Hong Kong, 4% in Singapore, 0.4% in Taiwan, and 0.1% in Korea. In 1983, the respective ratios were 10%, 7%, 3%, and only 0.7% (Antonelli, 1986).³

The Korean textiles industry's failure to invest in order to modernize underlay its deteriorating export performance. Despite the threat of protection, countries with quotas against textiles began to take a larger share of Korea's textiles exports whereas nonquota countries, where competition for market share was fiercer, took a smaller share. The share of quota areas in Korea's textiles exports increased from 46% in 1978 to 59% in 1985 (Ministry of Trade and Industry).

Inflation

While an unreconstructed textiles industry cast a damper on long run exports and growth, it did not prevent output from soaring in 1976-77. Buoyed by domestic investment in heavy industry and related infrastructure, the growth rate of output reached 14.1% in 1976 and 12.7% in 1977. The year before the second energy crisis struck, it equalled 9.7%, a rate just above the average for 1964 to 1972. The current account deficit, moreover, remained healthy up until oil prices again began their ascent. As a percentage of GNP, it equalled only -1.1 in 1976 and only -2.2 in 1978. In 1977, the current account even showed a small surplus, the first in Korea's recorded history, as remittances from the Middle East increased.

Thus, just after the Big Push into heavy industry and just before the second energy crisis, the Korean economy was in good shape. The fly in the ointment was inflation. Although mild by most industrializing

countries' standards, and below the 1974-75 level, inflation was high by post Korean War standards: up from 16% in 1977 to 22% in 1978 and 1979 (Table 3).

Table 13 suggests some of the determinants of inflation. One was agricultural prices, which rose due to an exceptionally poor harvest by more than in the period before the first energy crisis. Another was monetary policy, which was fairly accommodating of the high level of economic activity. M2 grew at a faster rate than in 1974-75, although both M2 and bank credit grew less than in the period 1965-73. The most outstanding rate of change, however, was that of manufacturing wages. The rise in manufacturing wages led to the declaration of a "turning point" in Korea's economic history, whereby an unlimited supply of agricultural workers for manufacturing industry was said to have come to an end (Bai, 1982).

Manufacturing wages rose especially rapidly in 1976-78 (see Table 14). But this was due to an unusual circumstance: the Middle East boom drained the most energetic, able bodied males from the labor force in unprecedented numbers. Between 1977, and 1979, roughly 292,600 male workers migrated overseas, comprising almost 27% of the male manufacturing workforce (Amsden, in process). The rate of wage increase of managerial, technical and administrative workers also began to rise (although throughout Korea's high growth period, the wages of production workers, on average, exceeded those of higher level employees) (Bai, 1982).

For the first time, the rate at which nominal wages was rising exceeded the rate at which productivity was rising and, therefore, unit labor costs rose. Unit labor costs rose more in 1976-78 than in 1967-69, when real wages also rose rapidly. The slower rate of increase of labor

productivity in the latter period reflected the still embryonic or infantile state of many heavy industries, which only began to fine tune operations when business declined and Japanese competition increased after the second energy crisis (Amsden, in process).

Although inflation in 1976-78 coincided with historically high real wage increases, savings rates, and a small current account deficit, it was coterminous with institutional wear and tear that was socially destabilizing.

The expression of discontent was greatest among the educated classes, the period of the Big Push having been relatively free of protest action by labor. The lowest paid workers may have been unconvinced by the government's reminders that they never had it so good. The highest paid workers may have been oppressed by long work hours and the presence of the chaebol in almost every aspect of their lives. But the wave of strikes that swept over Korea in 1979 occurred only immediately after, not before, the second oil price increase, when wages in some firms fell into arrears, and during the breakdown of state power in the months between the assassination of President Park in October 1979 and the assumption of power by General Chun Doo Whan in May 1980.

For the educated classes, the final years of the Big Push meant inflation, which reduced returns to moonlighting; and escalating real estate prices, which disappointed dreams of home ownership in a housing market with few rental properties. With their own interests in jeopardy, the educated classes' criticisms of the government grew more vocal. The speculation which underlay escalating real estate prices was interpreted as one of several signs of misfiring of state policy. Land speculation was attributed to the misuse of subsidized loans for unproductive rather than

productive ends. A much publicized crash program that improved rural housing but that disrupted urban construction and cement exports was taken as indicative of arbitrary and undisciplined government. The financial structure of firms was also believed to have become precarious.

Behind-the-scenes bailouts make the bankruptcy rate an unreliable indicator of insolvency. Debt-equity ratios, however, have been taken as evidence of financial cliff hanging (Cho and Cole, 1986). Yet debt-equity ratios in the manufacturing sector rose by only 13.5% between 1974/75 and 1976/77, and in the period of accelerated investments in heavy industry, 1977-79, they remained almost constant at around 370, well below the level prevailing in Japan, 446. ⁴

Disaffection among the educated classes with economic policy focused on the machinery branch of the heavy industries, although it accounted for no more than 10% of total loans to the manufacturing sector in the period 1975-82 (Yung Chul Park, 1985). It was in this sector that the government-business recipe for entering heavy industry became distorted. In some machinery subbranches, particularly electrical generating equipment, excess capacity emerged because building to achieve economies of scale went to extremes and too many firms were licensed to enter each manufacturing subbranch.

Indiscriminate licensing in some machinery subbranches had several possible explanations. (a) The government indulged in multiple licensing in the interests of national defense. (b) The government's administrative machinery was in need of revision to handle a larger and more complex volume of transactions. (c) The government lost control to the chaebol, could not refuse them licenses, and abused its disciplinary device of credit allocation. For their part, the chaebol were drawn into

the machinery sector by oligopolistic rivalry, subsidized credit, and the lure of riches. Either the government had to revamp its licensing procedures and regain control over the chaebol, or renounce control over credit allocation, thereby losing the most efficient means to achieve scale economies and competitive firm behavior simultaneously.

The Park government itself set machinery in motion to reduce inflation and to reform administrative procedures by announcing a Comprehensive Stabilization Plan in April, 1979. Whatever the intent of the Plan, it was derailed by the second round of oil price increases in July and by assassination in October. When the dust had settled and power had been appropriated by General Chun, history took an ironic twist. There were no interest groups around any longer to champion the basic economic principles of the old regime that had led to one of the rare cases of industrialization in the twentieth century. Students and intellectuals associated the old regime with dictatorship. Despite rising real wages, workers had been the primary victims of repression. The new military government was similar in kind to the old one, but had to differentiate its product. Here it found a useful ally in an emerging school of American trained economists. The school's article of faith became the misallocation of resources during the rise of heavy industry due to government intervention. Future growth was to be accomplished through liberalization of credit, imports, industrial licenses, direct foreign investment and an overall approach to economic development that reaffirmed the importance of light industry and small scale firms. As for the chaebol, while they may have had something to lose from a less politicized system of resource allocation, they also had something to gain from liberalization (except of imports, which they opposed, along with all other interest groups save the

American school of economists). Being far better endowed and more powerful than other economic actors, the chaebol stood to benefit from freer markets, and began to support selectively the new government's approach.

3. The Comprehensive Stabilization Plan, April 1979

When the Comprehensive Stabilization Plan of 1979 was reactivated by the new regime, it had two components: a structural one, discussed later; and a set of policies to deal with the immediate economic crisis triggered by the second oil price rise and political instability. Commodity price increases had led to a 13% deterioration in the terms of trade between 1979 and 1980. The deficit in the current account jumped from -2.2% of GNP in 1978 to -8.7% of GNP two years later. In 1980, the growth rate of GNP turned negative for the first time since the end of the Korean War.

Between 1981-85, however, the growth rate of GNP recovered and averaged 5.9%. While this growth rate was low by historical standards, it was commendable by international ones. Inflation, moreover, became virtually nil---25.6% in 1980 but only 4% in 1984.

It is suggested in the discussion which follows that much of the recovery in growth and in inflation had to do with the structural soundness of the industrialization effort of the 1970s. Another large part had to do with exogenous factors---the world economic recovery and an improvement in Korea's terms of trade (at a time when the terms of trade of other industrializing countries continued to deteriorate). The role played by macroeconomic policy in the narrower sense of earlier stabilization plans was much the same as in the past---driving away the domestic blues with expansionary measures. In 1983 and 1984, however, both fiscal and monetary

policy became unusually restrictive in order to obliterate inflation and to create safer conditions for foreign creditors.

Productivity in the Nonfarm Sector

Rising productivity was the critical factor in the economic recovery. Part of the productivity rise went for increases in real wages, which contained social unrest, and part went for a lower growth rate of unit labor costs. An improved cost position helped firms to export, thereby necessitating a lower devaluation of the currency than otherwise. In turn, a lower than otherwise devaluation of the currency made it easier for Korea to service its foreign debt.

The growth rate of labor productivity in manufacturing averaged 13.5% in 1978-79, 13.7% in 1980-81, and 11.5% in 1983-84 (Table 14).⁵ The rise in output per worker had more to do with an increase in productiveness than changes in employment. Although the nonfarm unemployment rate rose to a peak of 7.5% in 1980 (up from 4.7% in 1978), it fell steadily thereafter, to 4.9% in 1985. The average annual growth rate of nonfarm employment, moreover, while slower than previously, was nonetheless substantial: 4.9% in 1979-85 compared with 8.5% in 1976-78 and 6.9% in 1970-75 (Table App. 2). The layoff policies of the chaebol may have had something to do with the behavior of the unemployment rate and the maintenance of employment. Although Korea doesn't have a permanent employment system similar to Japan's, there is still social and political pressure on larger firms to avert layoffs, and the diversified business groups are able to transfer labor among affiliates. As the structure of industry shifted from light to heavy manufactures, and as the share in total employment accounted for by large firms and the chaebol rose (although less than their share in sales or shipments), employment held steadier.

Nonetheless, despite such steadiness, productivity increased. In part, productivity increased as exports rose and excess capacity became utilized.⁶ In part, it increased as capital-intensive investments in heavy industry began to fructify and firms fine tuned their operations. In part, it increased as the new regime pursued the same agenda and tactics as the old regime and forced chaebol in sectors characterized by over-expansion and "excessive competition" to amalgamate, specialize, or exit (KEB, 1980). Industries subject to rationalization included automobiles, heavy electrical equipment, electronic switching systems, diesel engines, copper smelting and, to little effect, power generating equipment. It was in the first half of the 1980s that Korea began to win a reputation for itself in business circles in the U.S. and Japan as a competent manufacturer---first of simple consumer electronics, then of ships and steel, and finally of consumer durables like 16-bit personal computers and automobiles. According to an IMF report: "Basic metal and machinery industries (including transport equipment) have developed rapidly over the past decade and have now become a leading source of growth."

The rise in productivity diminished the costs of the economic contraction that workers had to bear. True enough, real wages fell in 1980 and 1981, and the growth rate of real wages never recovered the height it had achieved in 1978. Nevertheless, even as inflation abated, workers continued to demand high nominal wage increases and real wages in 1982 and 1983 increased at an average annual rate of over 7%.

Under the old regime, public sector wage increases had been recommended to the private sector. Under the new regime, incomes policy became more of a declared integral part of overall policy. From 1981 to 1985, therefore, wage increases in the public sector were strongly

recommended to the private sector. Nevertheless, wage settlements in the two sectors were quite different. This was in spite of the fact that negotiated wages in the two sectors were rather similar. The private sector, therefore, through bonuses and fringe benefits, found a way to circumvent government recommendations (Castaneda and Fun Koo Park, 1986).

Because productivity was rising fairly fast and workers were at least enjoying some real gains, wages began to increase more in line with unit labor costs. The nominal growth rate of unit labor costs declined steadily from 1979 and was negative in 1982-1984 (Table 14).

Wage restraint (wages rising in line with productivity) cum real wage rises had a threefold effect: price increases were dampened, domestic demand was sustained, and Korea's external balance had less problem adjusting than otherwise.

The External Balance

Table 15 presents the balance of payments in 1978-85. It is clear that despite a jump in interest payments on the foreign debt associated with upward adjustments in LIBOR, the invisible account does not deteriorate by much due to invisible earnings. Increased imports of oil and food caused a \$7 billion rise in imports between 1978 and 1980. But even as imports continued to rise, if erratically, the external account improved, due largely to an increase in exports. As in previous periods of adjustment, it was export behavior that helped turn the economy around, if somewhat less spectacularly than in the past.

In early 1980, a 17% nominal devaluation was introduced followed by a managed float. Exports, however, continued to rise although by 1983, the real effective exchange rate had returned to its 1980 level.

Figure I depicts the relationship over time between the real effective exchange rate and exports. The two variables move together systematically, in either direction, in only four time periods: 1966-68, 1971-74, 1978-79, and 1982-83, although these years don't share any distinct characteristics. The rest of the time, the growth rate of exports appears to be influenced by factors other than the movement in the real effective exchange rate. That exports grew under unfavorable exchange rate conditions reduced the burden that an otherwise more depreciated currency would have had on debt repayment and inflation.

Inflation

Export behavior in 1983-85 was aided by a strong growth in import demand in the U.S., and beginning in September 1985, by a steep appreciation of the yen. The external account was also aided by the onset in 1983 of some moderation in the rise in international interest rates. Nevertheless, international interest rates remained high and protection dampened export performance of both light and heavy manufactures. The major effect of improved external conditions was on inflation.

Partial measures to contain price increases were first introduced in 1977 and 1978. In 1977, the government reduced the deficit in its Grain Management Fund to sterilize the effects on the money supply of an accumulation of foreign reserves. In the second half of 1978, a series of mini-stabilization measures was introduced that included increasing interest rates, imposing direct restrictions on domestic construction activity, and perversely in the case of short run price stability, increasing public utility charges and lifting certain price controls. These measures, however, were rendered ineffective by a rise in oil prices and then a rise in food prices caused by an exceptionally bad harvest. The

GNP deflator shot up to 25.6% in 1980, from 21.1% a year earlier, just as growth turned negative.

When inflation started to decline, the decline was largely due to relief from the forces that had fueled it in the first place: large wage increases in the late 1970s, which abated in the '80s, and sharp accelerations in the price of imported commodities, which began their descent in 1982. Agricultural prices fell from 26% in 1980-81 to 0.31% in 1982. The price of imported materials fell from 37.5% in 1980-81 to 1.3% in 1982 (Table 13).

Monetary Policy

Credit was tightened in 1979 in order to offset the impact of the oil price shock. The government reduced its debt with the banking system and restrained the expansion of bank credit to the private sector by lowering credit ceilings for each bank. The rate of growth of bank credit declined from 46% in 1978 to 36% in 1979 (Table 7). The rate of growth of M2 decelerated even faster than credit---from 35% to 25%, reflecting a large decline in net foreign assets.

A tight credit policy was maintained through mid-1980. Then in the second half of 1980 credit policy was relaxed in the face of the severe recession. Nevertheless, given the surge in inflation and the devaluation of the won, credit conditions remained tight and contributed further to the slowdown. The relative scarcity of bank credit during 1979-80 induced firms to increase their borrowing from nonbank financial intermediaries and from the money and securities market. Interest rates in the domestic banking system were initially raised in January 1980 but were subsequently reduced by an equivalent amount in order to protect the financial position

of the business sector. The interest rate reduction along with a rise in the CPI sharply lowered real interest rates.

In 1981, monetary policy accommodated increased bank borrowing by the public sector, which was associated with the expansionary stance of fiscal policy. The growth of domestic credit, however, fell from 42% in 1980 to 31% in 1981.

Monetary conditions in 1982 were dominated by a financial scandal in the curb market. Two large corporations were forced into bankruptcy and others were faced with insolvency. To offset the contraction in nonbank lending and to avoid a generalized financial crisis, the Bank of Korea permitted a rapid expansion of bank credit which it supported by sharply increasing reserve money. As the turmoil in financial markets subsided in the fourth quarter of 1982, expansion of domestic credit slowed to an annual rate of 18%.

As in the 1972 Emergency, the 1982 emergency included measures to deal with insolvent firms. The latter measures, however, were qualitatively distinct. As in the past, their objectives were to protect jobs and Korea's reputation in international markets. But to attain these objectives in the 1980s, the government acted to preserve existing productive capacity while at the same time transferring ownership and management to more competent firms. In the case of one chaebol that became insolvent, Kukje-ICC, its assets were taken over by a state-owned bank. These assets were then bundled---some good affiliated companies, some bad affiliated companies constituting a single package---and then sold in shotgun auctions to buyers who became the recipients of special loan privileges.

Labor Reserves

The appearance of new labor reserves suggests moderation in wage-push inflation in the future. There are three sources of as yet unexploited labor. First, agriculture, which still accounted for 25% of the economically active population in 1985 (down from 36% in 1980) (Table App. 2). Second, female labor, whose labor force participation rate began to rise. The labor force participation rate of women in the nonfarm sector jumped from 31% in 1975 (it was 30% in 1970) to 36% in 1978, and then, despite the recession, up to 38% in 1985. Participation rates increased especially among women between the ages of 30 and 59 whose share in the total population may be expected to rise as the growth rate of the population continues to decline. Third, educated labor, whose supply increased with increased investments in education. In 1970, 25% of the labor force had a secondary education, compared with 51% in 1984. The proportion of college educated in the labor force began to rise rapidly after 1982 (Castaneda and Park, 1986).

Savings, Investment and Government Spending

Declining profitability due to a deterioration in the terms of trade, a contraction in real money balances, a coming on stream of new additions to capacity, and political unrest, all contributed to a collapse in net investment spending in 1980. Gross investment, however, as a percent of GNP held firm while the ratio of savings declined from 29% in 1979 to 23% in 1980. Thus, the current account deficit worsened to almost 9% of GNP. The government resisted taking strong measures to reduce investment further. OPEC's pricing policies also generated a renewed abundance of capital in international markets, and domestic inflation

pushed the real interest rate on foreign loans to negative. As in the past, instead of deflating, the government borrowed abroad.

Economic activity remained at a low ebb in 1981 and net private investment slid further. Again, by borrowing heavily abroad, the government sustained investment. As a consequence, Korea's total external debt grew by 59% from 1979 to 1981. Total debt as a percentage of GNP was 32% in 1979, the last year of the Big Push, and 48% in 1981. As the trade deficit in the current account narrowed, the deficit attributable to interest payments widened (Table 15).

The posture of public sector operations ranged from restrictive, in the final year of the Big Push, to expansionary in 1981-82, and then back to restrictive, in 1983-84. The public sector deficit as a percent of GNP was 1.4% in both 1979 and 1984, having peaked at 4.6% in 1981 (Table 16). The composition of fiscal policy included tax reforms and expenditure switching, partly toward pyramid building for the 1986 Olympics and 1988 Asian Games in Seoul. Both private and public investment shifted away from the export sector toward the home economy. Wholesale and retail trade, restaurants and hotels accounted for 13% of fixed capital formation in 1984 compared with 6.5% in 1978 (Bank of Korea).

In 1979, the objectives of fiscal policy were to reduce the public sector deficit and minimize its impact on the money supply. Prices of most public utilities were adjusted upwards. A tight spending policy was adhered to in the first half of 1980. In the second half, however, the government accelerated its spending to counteract the downturn in economic activity. A supplementary budget provided selective assistance to low income households. A number of deferred investment projects were implemented. Public sector wages were increased. The increase in the

financial requirements of the public sector was financed entirely by the domestic banking system.

In 1981, fiscal policy was used to stimulate aggregate demand. Public sector expenditures were raised and taxes were cut. The structure of expenditure shifted toward public capital formation and housing. Income taxes for low income workers were cut and a temporary investment tax credit was extended. The larger overall deficit in 1981 resulted in increases in both foreign and domestic financing. In 1982, fiscal policy was restrained to help correct the external imbalance and to fight inflation. Expenditure restraint held central government outlays roughly unchanged as a proportion of GNP (22.5%) (Aghevli and Marquez-Ruarte, 1985).

Despite the change in regime, stabilization policy between mid 1979 and the end of 1982 exhibited no major departures from past practice. Because the sharp downturn in 1974-75 and in 1979-82 was triggered exogenously, it was ministered in both cases by sharp external infusions of credit. In both cases, as well as in the stabilization of 1971-72, a resurgence in exports led the way to recovery (Table 8). Exchange rate policy in all three stabilizations was one of fairly sharp devaluation. In the stabilizations associated with the two energy crises, however, the exchange rate quickly appreciated after devaluation. Exports rebounded nonetheless.

Investment behavior was fairly similar in the contractions of the early 1970s and early 1980s (whereas in 1974-75, the investment boom that had been underway continued uninterrupted). Private investment fell, private savings fell by even more, and the tasks of borrowing and beefing up investment were assumed by the government (Tables 6 and App. 1). The stance of monetary policy varied over the course of each stabilization.

But in all three cases, the monetary authorities acted to lower interest rates and hence, the cost of borrowing. The intention was to avert insolvency and/or to mitigate inflation by reducing the cost of working capital (both objectives were pursued simultaneously in 1982). Financially troubled firms in both 1972 and 1982 were rescued by the government, but in the second instance, by a method designed to improve productivity.

In early 1983, however, at a time when price increases in Korea were already well below historical levels (the CPI was 7.2% in 1982 compared with 11.6% in 1965-73), the government, in concert with the IMF, tightened the fiscal and monetary screws. The stated objective was to prepare the macroeconomic environment for the structural liberalizations that were just getting underway. An adjustment program was formulated which was supported by a stand-by arrangement with the Fund.⁷ The program envisioned a sharp deceleration in the growth of external debt and a substantial improvement in its maturity structure (long term debt as a percentage of total debt had fallen from 74% in 1978 to 62% in 1982--Table 4). To achieve these objectives, the program included a steep reduction in both the public sector deficit and rate of credit expansion and a real depreciation of the currency. The public sector deficit fell by about three percentage points between 1981-82 and 1983-84, the rate of credit expansion was cut by more than half to about 13% and the real effective exchange rate was depreciated by about 7% in 1983 and remained stable thereafter.

The triumphs of this tightening were threefold. First, long term debt as a percent of total debt rose from 62% in 1982 to 73.5% in 1984 (Table 4). Second, savings as a percent of GNP rose from 23% in 1982 to 28% in 1984. The current account deficit, therefore, was unusually low in

1984 by historical standards (Table 6). Third, inflation was all but eliminated. Nevertheless, diminishing returns set in and all growth indicators were down in 1984 (Table 8). In 1985 GNP grew by only 5.1%, its lowest level since 1980 and below the level of any other year beginning in 1962.

Distribution Effects

The distribution effects associated with the stabilization of 1979-84 have two roots, which are discussed in turn. One, the effects exerted by the economic downturn itself and the stabilization measures taken to counter it. Two, the effects exerted by the CSP's structural reforms.

A. Agriculture

Stabilization may have taken its highest toll in agriculture because in the budget crunch of 1983-84, a prime target of economy was agricultural price supports. Because the potential for increases in productivity on the farm were less than in the factory, price supports in the 1970s had been instrumental in keeping farm and nonfarm household income on a par. Under a dual price system, the government bought grain (rice and barley) from farmers at a higher price than it sold it to consumers. In 1981, the Grain Management Fund accounted for as much as 30% of the consolidated budget deficit. After 1981, this deficit was drastically pared, from -569.5 billion won in 1981, to -482.0 billion won in 1982, to -241.6 billion won (preliminary) in 1983, to -98.3 billion won (projected) in 1984 (World Bank, 1984). The deficit decrease was facilitated by a fall in the general price level. But the differential in price changes between the non-agriculture GNP deflator (NAD) and the agriculture price index suggests that it was farmers who were squeezed the

most. The NAD declined from 22.02% in 1980-81 to 2.99% in 1984. The growth rate of agriculture prices declined from 26.07% in 1980-81 to -0.08% in 1984 (Table 13).

To help farmers increase their income, the government introduced a diversification program in 1983. To develop the livestock industry, many calves were imported and distributed to general farms. The program, however, was mismanaged and farmers were hurt by a Cobweb price effect.

Throughout the 1960s and 1970s, there had been significant outward migration from rural to urban areas, and the share of agriculture in national income had declined. But between 1982 and 1985, there was a mass exodus out of agriculture (about 600,000 people), even larger than the migration associated with the 1980 harvest failure (about 85,000 people), although the exact magnitudes of the migrations are unrecorded. The last wave of migrants, however, was believed to consist of relatively older people, unequipped to enter the urban labor force and unaccounted for in the unemployment statistics, which, therefore, were lower than otherwise (Castaneda and Park, 1986).

In 1984-85 there were sit-down strikes by young farmers to protest the government's price and import policies. Between 1979 and 1983, imports of grains rose by 28% whereas the growth rate of imports during the 1970s had remained fairly constant (Ministry of Agriculture and Fisheries).

These events notwithstanding, government figures show farm household income exceeding nonfarm household income in 1983 by a wider margin than in any year other than 1974 (EPB, 1984).

B. The Size Distribution of Income and Poverty

According to estimates of the Korea Development Institute (KDI), between 1980 and 1984 the size distribution of income became more

equitable, as measured by a fall in the Gini coefficient, from .3891 to .3567 (Sang Mok Suh, 1986). The incidence of absolute and relative poverty is also shown to have decreased dramatically, both in the urban and rural areas. It is unclear, however, both how absolute and relative poverty are measured and the degree to which income earners in the informal sector are included in estimates of the Gini coefficient, as noted earlier (the share of unincorporated firms in national income was 18.2% in 1984, down from 30.0% in 1978) (EPB, 1984).

The size distribution of income may have improved between 1980 and 1984 because the real wage increases of production workers exceeded those of managers and technicians (Table 14). This differential in growth rates, in turn, was due to a relatively higher rate of increase in the supply of skilled labor and a lower rate of increase in the demand for skilled labor by comparison with workers of lesser skill. Consequently, unemployment in the 1980s was higher among the more educated than the less educated. The educated unemployment rate would have been even higher had not the Ministry of Education increased college enrollment by 60% in 1980 (although only 30% of new entrants would be allowed to continue after their freshman year) (Castaneda and Park, 1986).

C. The functional Distribution of Income

Both workers and capitalists protected themselves from the stabilization, thanks to a strong productivity performance: workers, in the form of real wage increases; and capitalists in the form of positive rates of return. But the growth rate of unit labor costs became negative and, according to estimates of Wontack Hong (forthcoming), the real rate of return on investment in manufacturing in 1983 was higher than in all previous years since 1954. Therefore, in all likelihood the distribution

of income between the social classes since the introduction of stabilization has favored capital.

4. Structural Change

After fire fighting in 1980-82, the architects of the Comprehensive Stabilization Plan continued to work on the premise that government distortions in the 1970s had created gross inefficiencies, all evidence to the contrary notwithstanding. One indisputable cost that industrialization had imposed---a rise in aggregate economic concentration---was less explicitly articulated in policy making. Nevertheless, this problem became more acute partly as a consequence of events associated with stabilization itself. In terms of shipments in the manufacturing sector, the share of the top ten business groups rose from 21% in 1977 to 30% in 1982 (Table 17)⁸. In terms of economy-wide sales, the share in GNP of the top ten groups rose from 33% in 1979 to 48% in 1980, 56% in 1981, and then to a staggering 67% in 1984 (Table 18).

In part, increased concentration was the outcome of the government's policy of shotgun rationalization. In part, it was the outcome of the economic downturn. Smaller, financially weaker firms were acquired by larger, financially stronger ones. Whereas diversification in the 1970s had occurred largely on the basis of establishing new ventures, in the 1980s it had occurred largely on the basis of acquiring existing firms (Seok Ki Kim, 1986). Acquisition, however, was sometimes predatory and sometimes instigated by the government. For example, one of the top ten chaebol, the Ssangyong group, was forced by the government to absorb a textiles machinery manufacturer with 400 workers in the interests of developing the textiles machinery industry in Korea. Finally, increased

concentration was in part the outcome of privatization. One business group catapulted into the league of the top ten when it acquired a government-owned petrochemical complex.

The rise of aggregate economic concentration evoked an intense interest among people of all political persuasions about the distribution of income among firms of different size. Issues of equity as well as efficiency, therefore, became the concern of the Comprehensive Stabilization planners.

In the 1970s, selective price controls had been used to contain unfair monopoly practices in the domestic market. In addition, the Park regime had pushed a policy to spread the wealth through stock ownership, although with only limited success. In 1974, the government issued a directive in which it stated its simultaneous intentions of achieving internationally competitive size firms and preventing the accumulation of business assets in the hands of a few individuals or family groups. The idea was to get business firms to go public and sell shares on the stock exchange. The forms force took were: a) To induce firms to go public by means of bestowing appropriate privileges to "well managed" publicly held corporations. b) To reinforce tax surveillance and the outside audit system for corporations and large shareholders to increase corporations' credibility (Jones and Sakong, 1980). But the Park regime appears to have been more successful (or interested) in getting the chaebol to export than in getting them to dilute their ownership and control. The Korean stock exchange is moribund and what little activity exists is dominated by insiders.

The new regime has eschewed wealth sharing in this form. Rather, it has emphasized equal opportunity: the deepening of capital markets is

expected to make credit more widely available to enterprising firms of every size. To contain monopoly power directly, the new regime has passed anti-trust, fair practices legislation on the American model. Ultimately, however, liberalization is expected to achieve both equity and growth, although typically markets don't work equitably in the presence of high degrees of economic concentration.

The idee fixe of liberalization is still in its early stages of implementation, and it is as yet difficult to distinguish theory from practice. Many reforms, moreover, such as the deepening of capital markets, take time to achieve.

a. Industrial Licenses and Credit

Seven different categories of laws and acts regulating industrial licenses have been abolished in order to eliminate all administrative barriers to entry. In theory, therefore, industrial licensing is no longer discriminatory except in defense-related sectors. In practice, however, numerous business people report being denied industrial licenses to enter industries which are unrelated to defense. What appears to have changed, however, is the following: corrupt officials in the EPB who were identified with particular chaebol have been removed from office.

It is intended that capital markets decide what will be produced, and by whom. There has in fact been substantial liberalization and integration of financial markets. But this has occurred less as a consequence of conscious government efforts to reduce regulation than because of accelerated growth of non-bank financial institutions (NBFIs) in a favorable environment of reduced inflation. The degree to which NBFIs are themselves regulated by the government is unclear. What is clearer are the inroads into the financial sector made by the chaebol, rendering them

more structurally similar to their zaibatsu counterparts in Japan, with integrated manufacturing, marketing as well as financial functions. It is widely believed that the large conglomerates have succeeded in gaining control of individual banks (a central feature of the liberalization policy was the sale of the government's shares in the large commercial banks, which occurred between 1981 and 1983). They also have controlling interests in some NBFIs such as insurance companies and investment and finance companies (Cho and Cole, 1986). Nevertheless, the large commercial banks still appear to be under the sway of the government, which, as a major shareholder, has a large say in banks' elected officials.

If, therefore, the government's licensing and credit policies reached a fork in the road in the late 1970s - either the government had to regain control over the chaebol through tightening licensing procedures, or renounce control over credit - the road chosen appears to be the one whereby licensing procedures have been sanitized and strengthened.

b. Monopoly

A Monopoly Regulation and Fair Trade Act is now in effect, but it is not being stringently enforced.

Although the number of corporations designated by the government as dominating their respective markets increased from 105 in 1981 to 216 in 1985, no more than ten were accused of having abused their power. Out of 1,172 applications for corporate integration, all but two were approved (Lee, Urata, and Choi, 1986).

The Act, moreover, does not include a restrictive clause on conglomerate integration because "there was a concern that such policies would harm enterprises which had fallen on hard times since the recession beginning in 1979" and "the problem of the concentration of economic power

is very complicated and difficult to solve by the Monopoly Regulation Act alone" (Lee, Urata, and Choi, 1986).

c. Small and Medium Size Firms

Until the mid 1970s, the Park regime discriminated against small and medium size firms (defined as having fewer than 300 workers) in its allocation of credit. The new regime, therefore, has attempted to equalize borrowing costs and accessibility among firms of different size. Beginning in 1982, access to borrowing turned in favor of smaller firms (with firms being divided into small and large), either because of the freer play of market forces or the extended loan facilities of special banks that cater to the small firm sector. Access is measured as the ratio of total bank loans and foreign loans over total assets of each subgroup. Nevertheless, the ratio of the two subgroups was not much different in 1982-84 compared with 1977-79, during the Big Push, because the Park regime had already begun to reverse its discriminatory credit allocation policies in 1977 (Table 19). As for the cost of borrowing, it also first turned in favor of small firms in 1979, during the big Push, and then again in 1982-84 (Table 20).

The government has also introduced legislation to protect the rights of subcontractors (Jae Won Kim, 1983). The trend in subcontracting, however, appears to be towards the institutionalization of a system along Japanese lines, wherein prime contractors exert significant financial and administrative control over their suppliers.

d. The Textiles Industry

Equalization in the allocation of credit to light and heavy industries is another major policy objective of the CSP. The evidence

shows that differences in the cost of borrowing between the two sectors has narrowed. Access to loans turned in favor of light industry in 1984 (Tables 19 and 20). Nevertheless, the single most important subbranch of light manufacturing, textiles spinning and weaving, was never discriminated against and government policy with respect to modernization remains indecisive. None of the major chaebol is involved in cotton spinning and weaving and the twenty large scale, long standing independent firms that dominate the industry are oriented towards short run profit maximization (Amsden, in process).

In 1981, the government established a Textiles Modernization Fund to revive the industry and to replace old machinery. (In 1982, it was discovered that over 50% of looms and over 40% of spindles were obsolete--over ten years old.) Conservative textile firms remained unresponsive until 1985, when investment gave signs of recovery with the appreciation of the Japanese Yen and the likelihood of demand switching by foreign borrowers in favor of Korean textiles.

e. Trade Policy

A major policy change introduced in 1982 was to eliminate preferential bank loan rates for priority activities such as exporting. Borrowers who are engaged in priority activities such as exporting continue to have preferential access to bank loans, but after 1982 they ceased to benefit from special interest rates (general loan interest rates fell to the prevailing levels of preferential loans). Table 20 shows the interest cost differential for domestic and export industry. Exporters had the cost advantage over domestically oriented firms in all years except 1978 and 1979, but the size of the advantage was much greater in 1980-82, when the government put a halt to further heavy industry development, than in

1972-77, during the Big Push. In 1983 and 1984, the cost advantage of exporters fell, reflecting the new policy turn, but was still positive, due to "privileged access to bank loans" (Cho and Cole, 1986).

Yet while prioritization was being decreased in one area it was being increased in another. Special funds were established to help heavy industries offer long term suppliers' credits to compete against the state-subsidized financing of such exports in developed countries, especially Japan.

The elimination of preferential bank loan rates for priority activities, specifically exporting, is significant because it signifies a de facto policy to reduce Korea's dependence on exports. In a highly protectionist world, an export coefficient which exceeds 35% has made people appreciate the importance of developing the home market. To reduce dependence, however, requires the coordination of exchange rate, export, as well as import policies. The largest single category of goods that Korea imports, capital goods, accounts for approximately 30% of total imports. Yung Chul Park and Dornbusch (1986) call for import substitution of such goods. Even as the import coefficient is being reduced, import demand should be shifted towards countries with which Korea runs a trade surplus. In 1986, Korea ran a \$6 billion trade surplus with the U.S. and a \$6 billion trade deficit with Japan.

The Comprehensive Stabilization Plan, however, calls for non-discretionary, across-the-board import liberalization, the objective being to reduce both overall trade barriers and the dispersion about the mean. The road to freer trade has been paved with reductions in tariffs and the number of items on the prohibited list. The evidence shows that tariffs have declined and that liberated imports have increased, but this

says little since the unit of measurement is number, rather than value, of items. Shoppers, however, report that liberalization of consumer goods is actually happening. The U.S. Trade Commission, in response to a large trade deficit with Korea, forced Korea to liberalize restrictions on U.S.-made cigarettes. At the beginning of 1987, the government even opened the door to foreign-made automobiles, as long promised. As for producer goods, Korea has liberalized many of the items requested by the U.S. Department of Commerce, although in most cases the unintended consequence has been an increase in inputs from Japan, not the U.S., despite the weakness of the dollar (Amsden and Min, 1987).

Nevertheless, the import regime now in effect in Korea resembles that in effect in Japan. First, Korea has resisted liberalizing agricultural imports, in deference to a strong agrarian lobby. Second, red tape still surrounds imports of those products with large scale economies and dependence on home demand for profitable production; say, consumer electronics and automobiles. In the case of automobiles, while consumers may now import them, foreign cars have begun to sell in Korea at approximately 350% above their international price, what with a 60% tariff and a slew of taxes. Public opinion in Korea has also opposed liberalizing too fast, whatever the burden to the consumer. A sign of the times was the dismissal of Mr. Kiwan Kim, one of the most vocal advocates of import liberalization, in the summer of 1986. The government suddenly abolished the organization he headed, the International Economic Policy Council.

The following conclusions may be drawn about the Comprehensive Stabilization Plan. The road to reform followed by Korea since the beginning of the early 1980s shows contours, bumps, and stretches more akin to economic policies of the past twenty years than to the free market

doctrines that have guided CSP policy makers. At the heart of past policies is the subsidy. In conjunction with a highly politicized process of industrial licensing and long-term credit allocation, subsidies have been used to guide economic behavior, export targeting providing the government with a device to discipline subsidy recipients, a device absent in so many other countries where subsidies are also king. Korea has relied on foreign markets to absorb its exports, and it has also used the market mechanism under certain conditions to discipline firms. But it has never embraced the market mechanism as a rule of thumb.

GNP growth in 1986 is expected to be as high as 11%, in large part a consequence of external factors. Interest payments on Korea's large foreign debt declined because of declines in U.S. interest rates (the interest rate on foreign loans is often tied to Libor). Imports also grew at a slower rate than GNP because of declines in the price of oil and food grains. Most important, exports to the U.S. of automobiles and electronics soared. As in other recoveries, therefore, exports led the way, a reflection of the high levels of productivity achieved by Korea's large, oligopolistic, diversified business groups.

What remains to be reformed is the political process itself. There are daily protests from the student movement and pressure from the educated classes to increase the democratic content of government. Such democracy may prove the only method to insure that the diversified business groups remain productive while serving the workforce at large and the public interest.

Footnotes

* I would like to thank Sun Shik Min for excellent research assistance and Seung Soo Han and David I. Levine for helpful comments.

1. In 1965, the IMF insisted, as a condition for a stand-by agreement, that a selective system of direct export subsidies be discontinued (Cole and Park, 1983).
2. The two major exceptions were ships and automobiles. Ships, which accounted for 16% of Korea's commodity exports in 1984, have not been protected from imports and about 60% of Korea's additions to its merchant fleet in 1984 was accounted for by imports of used vessels. Automobiles have been protected for about twenty years and have just begun to be exported.
3. Korea also lagged behind in adopting the new weaving technology, shuttleless looms. In 1983, the ratio of shuttleless looms to total looms was 18% in Hong Kong and only 2% in Korea (Antonelli, 1986a).
4. The increase in the debt-equity ratio may be explained by two factors: financial weakness and a greater orientation to exports on the basis of government subsidized credit. Cross-sectionally, the highest debt-equity ratios are found among industries with the highest export propensities.

5. The behavior of labor productivity measured as value added per worker shows the same trend but a lower level.
6. Capacity utilization rates are provided in Tables App 3A and App 4A. The method used to measure capacity utilization, however, is unclear.
7. The 1981-82 adjustment program had been supported with a stand-by arrangement with the Fund and a structural adjustment loan from the World Bank. The stand-by arrangement in 1983 involved another loan from the World Bank of \$300 million for the structural elements of the program.
8. The statistics on shipments are likely to understate concentration. Chaebol often own minority shares in their subcontractors. The statistics will treat such subcontractors as independent firms although in practice the chaebol exercise considerable control over them.

Bibliography

- Administration of Labor Affairs. 1978-80. Yearbook of Labor Statistics, Seoul.
- Aghevli, B.B. and J. Marquez-Ruarte. 1985. "A Case of Successful Adjustment: Korea's Experience During 1980-84," International Monetary Fund.
- Amsden, A. (In process). Economic Backwardness in Contemporary Perspective: South Korea and the Properties of Industrialization Through Learning, Mimeo.
- Amsden, A. and Sunshik Min. In process. "American Performance in Third World Markets: Why Japanese Firms Out-compete American Firms in South Korea," Mimeo.
- Antonelli, C. 1986. "The International Diffusion of Process Innovations and the Neotechnology Theory of International Trade," Economic Notes, 1.
- _____ 1986a. "Technological Expectations and the International Diffusion of Process Innovations," Mimeo, Politecnico di Milano.
- Bai, M.K. 1982. "The Turning Point in the Korean Economy," The Developing Economies, xx, 2 (June).

Bank of Korea. Various years. Economic Statistical Yearbook, Seoul.

Bhalla, S.S. 1979. "Aspects of Income Distribution (and Employment) in South Korea," World Bank Paper, Employment and Rural Development Division, Mimeo.

Castaneda, T. and Fun-Koo Park. 1986. "Structural Adjustment and the Role of the Labor Market," Korea Development Institute and the World Bank.

Cho, Yoon Je and D.C. Cole, 1986. "The Role of the Financial Sector in Korea's Structural Adjustment," Korean Development Institute and the World Bank.

Choi, Jang Jip. 1983. "Interest Conflict and Political Control in South Korea: A Study of the Labor Unions in Manufacturing Industries, 1961-1980," Ph.D. Dissertation, University of Chicago.

Cole, D. and Yung Chul Park, 1983. Financial Development in Korea, 1945 - 1978, Cambridge, MA, HUP.

Corbo, V. and Sang-Woo Nam, 1986. "Controlling Inflation: Korea's Experience," Korean Development Institute and the World Bank.

EPB (Economic Planning Board). 1984. Major Statistics of Korean Economy, 1984, Seoul.

_____. Various Years. Korea Statistical Yearbook, Seoul.

- Frank, C., K.S. Kim, and L Westphal. 1975. Foreign Trade Regime, and Economic Development: South Korea, N.Y., National Bureau of Economic Research.
- Hong, Wontack. Forthcoming. "Import Restriction and Import Liberalization in an Export Oriented Developing Economy" in L. Krause and K. Kim (eds.), In Light of Korean Experience.
- Hong, Wontack and Yung Chul Park. 1986 "The Financing of Export Oriented Growth in Korea," in A.H.H. Tan and B. Kaput (eds.), Pacific Growth and Financial Interdependence, Allen and Unwen.
- IMF (International Monetary Fund). 1986. International Financial Statistics: Yearbook, Geneva.
- Jones, I. and I. Sakong. 1980. Government, Business and Economic Development: The Korean Case, Cambridge, MA, HUP.
- KEB (Korea Exchange Bank). 1980. "Adjustment of Korea's Heavy and Chemical Industry Investment," Monthly Review, XIV, 12 (December).
- KDB (Korean Development Bank) 1984. Industry in Korea, Seoul.
- Kim, J. 1966. "The Korean Cotton Manufacturing Industry," Ph.D., University Microfilms, Michigan.

- Kim, Jae Won. 1983. "Subcontracting Market Expansion and Subcontracting Activities Promotion - The Case of Korea's Machinery Industry," Korean Development Institute Working Paper 8305.
- Kim, Seok Ki. 1986. In process. "Business Concentration and Government Policy: A Study of the Phenomenon of Business Groups," D.B.A. Dissertation, Harvard Business School.
- Kim, Sooyong. 1982. "Contract Migration in the Republic of Korea," I.L.O., International Migration for Employment Branch. (Mimeo)
- Kim, Yong Bong. 1980. "The Growth and Structural Change of Textile Industry," in Chong Kee Park (ed.) Macroeconomic and Industrial Development in Korea, Korea Development Institute.
- Krueger, A. 1979. The Developmental Role of Foreign Sector and Aid, Cambridge, MA, HUP.
- Krueger, A. and L. H. Summers. 1986. "Reflections on the Inter-Industry Wage Structure," Harvard Institute of Economic Research, Discussion Paper No. 1252 (July).
- Lee, Joung Woo. 1983. "Economic Development and Wage Inequality in Korea," Ph.D., Harvard.

- Lee, Kyu-Uck, S. Urata and I. Choi. 1986. "Recent Developments in Industrial Organizational Issues in Korea," Korean Development Institute and the World Bank.
- Lindauer, David L. 1984. "Labor Market Behavior in the Republic of Korea: An Analysis of Wages and Their Impact on the Economy," World Bank Staff Working Paper No. 641.
- MOL (Ministry of Labor). 1981, 1985. Report on Occupational Wage Survey, Seoul.
- Office of Labor Affairs. 1971-77. Yearbook of Labor Statistics, Seoul.
- PaineWebber. 1985. World Steel Dynamics, POSCO: Korea's Emerging Giant, N.Y.
- Park, Yung Chul. 1985. "Korea's Experience with External Debt Management," in G. Smith and J. Cuddington (eds.), International Debt and the Developing Countries, the World Bank.
- _____ and R. Dornbusch. 1986. "The External Balance of Korea," Korea Development Institute and the World Bank.
- Rhee, Yung Whee, B. Ross-Larson, and G. Pursell. 1984. Korea's Competitive Edge, Johns Hopkins for the World Bank.

Suh, Sang Mok. 1986. "The Evolution of the Korean Economy in Historical Perspective," Korean Development Institute and the World Bank.

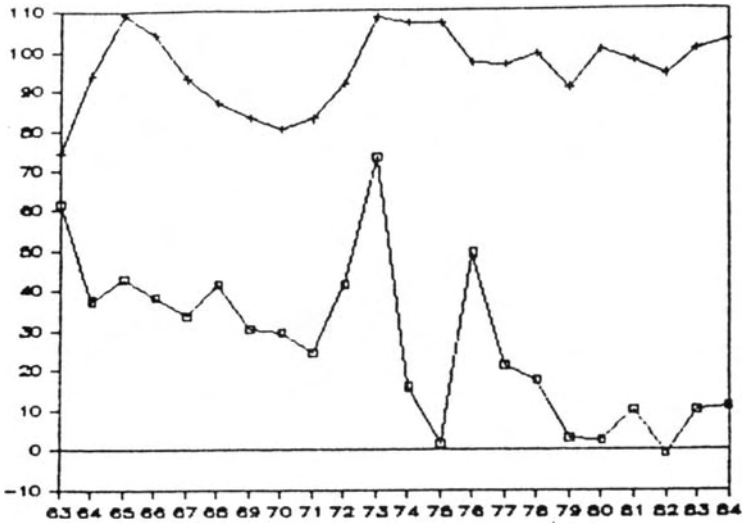
Westphal, L., L. Kim and C. Dahlman. 1984.

World Bank. 1984. Korea: Development in a Global Context, Washington, D.C.

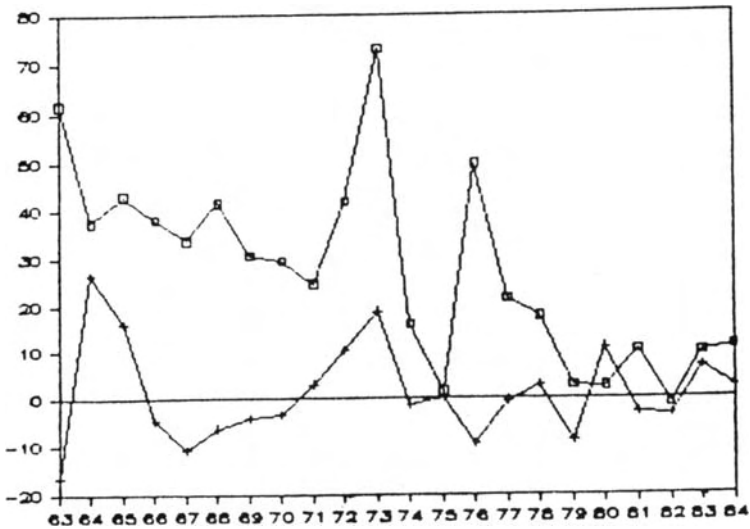
Young, Soogil and S.S. Rhee. 1986. "Korea's Industrial Adjustment and Import Liberalization Policies," Korean Development Institute and the World Bank.

Figure 1

Relationship Between Exports and Real Effective Exchange Rate (REER)



A. Index of REER and Growth Rate of Exports



B. Rate of Changes of REER and Growth Rates of Exports

Notes: □ = Growth rate of exports
+ = REER

The index of REER is the inverse of column 5, Table 1. An increase in the index indicates a depreciation in the won. Thus, the two variables presented in the figure are expected to move in the same direction.

Source: Bank of Korea and International Monetary Fund,

Table 1

Indicators of Human Capital, R&D, and Direct Foreign Investment
In Five Newly Industrialized Countries

Item	Year or Period	Argentina	Brazil	India	Korea	Mexico
<u>Postsecondary students abroad</u> as a percentage of all postsecondary students	1970	1.0	1.0	1.0	2.0	1.0
	1975-77	0.3	0.7	0.3	1.7	1.0
<u>Secondary students</u> as a percentage of secondary age population	1965	-	-	29.0	29.0	17.0
	1978	46.0	17.0	30.0	68.0	37.0
<u>Postsecondary students</u> as a percentage of eligible postsecondary age population	1965	-	-	4.0	5.0	3.0
	1978	18.0	10.0	9.0	9.0	9.0
<u>Engineering students</u> as a percentage of total postsecondary age population	1978	14.0	12.0	-	26.0	14.0
<u>Scientists and engineers</u> in thousands per million of population	Late 1960s	12.8	5.6	1.9	6.9	6.6
	Late 1970s	16.5	5.9	3.0	22.0	6.9
<u>Scientists and engineers in R&D</u> per million of population	1974	323	75	58	-	101
	1976	311	-	46	325	-
	1978	313	208	-	398	-
<u>R&D expenditures</u> as a percentage of gross national product	1973	0.3	0.4	0.4	0.3	0.2
	1978	0.4	0.6	0.6	0.7	-
<u>Stock of direct foreign investment</u> as a percentage of gross domestic product	1967	10.4	4.0	3.0	1.7	7.3
	1977-79	4.7	6.4	2.1	3.2	5.6

(-) = Not available.

Source: Adapted from Westphal, Kim and Dahlman (1984).

Table 2
The Coerciveness of Export Targeting

What has been the effect of export targets fixed for your firm? (Check, if yes.)

Effect	1974		1975		1976	
	Number of firms	Percentage composition	Number of firms	Percentage composition	Number of firms	Percentage composition
Contributed to a more rapid increase of production	48	42	48	32	58	37
Made no difference to the growth of production	16	14	24	16	15	10
Caused the firm to divert sales from the domestic to export markets	23	20	22	15	28	18
Reduced the profitability of the firm	8	7	17	12	14	9
Led to price-cutting, unprofitable sales condition, and other forms of competition adverse to the firm	6	5	16	11	15	10
Led to some unprofitable exports	5	4	12	8	8	5
Raised unit costs due to the employment of inexperienced personnel or for other reasons	8	7	11	7	16	10
Led to some deterioration of product quality	1	1	2	1	1	1
Total number of responses	115	100	152	100	155	100

Note: 105 firms replied to this question, some more than once, and some only for one or two years.

Source: Adapted from Rhee, Ross-Larson, and Pursell (1984)

Table 3

Basic Macro Indicators, 1962-1984

<u>Year</u>	<u>GNP Growth Rate</u>	<u>Change in GNP Deflator</u>	<u>Export Growth Rate^a</u>	<u>Export Growth Rate^b</u>	<u>Real Effective Exchange Rate^c</u>	<u>Ratio of Current Account to GNP</u>	<u>Terms of Trade^c</u>
1962	2.2	13.5	31.7	31.0	112.0	-2.0	n.a.
1963	9.1	28.3	61.1	61.6	134.4	-3.7	111.3
1964	9.6	30.0	37.9	37.6	106.3	-0.8	112.5
1965	5.8	6.3	45.8	43.0	91.6	0.3	114.3
1966	12.7	14.2	42.9	38.3	96.1	-2.7	127.7
1967	6.6	15.8	34.0	33.7	107.9	-4.1	132.2
1968	11.3	15.9	45.1	41.5	115.2	-7.4	137.7
1969	13.8	14.6	35.4	30.3	120.1	-7.3	132.6
1970	7.6	15.7	34.0	29.3	124.2	-7.1	133.8
1971	8.8	13.4	28.5	24.3	120.7	-8.7	132.7
1972	5.7	16.4	47.9	41.7	109.4	-3.5	132.1
1973	14.1	13.4	95.9	73.2	92.4	-2.3	125.4
1974	7.7	29.5	37.5	15.7	93.6	-10.9	102.1
1975	6.9	25.8	10.8	1.4	93.5	-9.0	92.1
1976	14.1	20.5	56.2	49.2	103.4	-1.1	105.1
1977	12.7	15.8	28.6	21.1	103.9	0.0	112.4
1978	9.7	21.9	26.5	17.4	101.0	-2.2	117.8
1979	6.5	21.1	15.7	2.8	110.7	-6.4	115.3
1980	-5.2	25.6	17.1	2.6	100.0	-8.7	100.0
1981	6.2	15.9	20.1	10.0	103.1	-6.9	97.9
1982	5.6	7.1	1.0	-1.0	106.9	-3.7	102.2
1983	9.5	3.0	11.1	9.8	100.2	-2.1	103.1
1984	7.6	4.0	13.5	10.9	97.8	-1.7	105.3

^aGrowth rate in nominal U.S.\$.^bExport value deflated by US WPI.^c1980 = 100.

Sources: Bank of Korea and International Monetary Fund.

Table 4
External Debt and Debt Service

<u>Year</u>	<u>Total Foreign Debt</u> (millions US \$)	<u>Long-Term Debt as % of Total</u>	<u>Total Debt as % of GNP</u>	<u>Debt Service as % of GNP</u>	<u>Debt Service as % of Exports^a</u>	<u>Debt Service as % of Current Transactions Receipts^b</u>
1963	157	85.99	4.06	0.05	2.30	1.1
1964	177	94.35	5.29	0.15	4.17	2.4
1965	206	98.54	6.81	0.46	8.00	4.8
1966	392	98.21	10.26	0.34	5.20	2.9
1967	645	89.77	13.62	0.72	10.15	5.3
1968	1,199	92.58	20.07	0.77	9.47	5.2
1969	1,800	89.22	24.07	1.20	13.68	7.8
1970	2,245	83.39	25.48	2.84	28.34	18.1
1971	2,922	83.61	30.06	3.28	28.16	19.7
1972	3,589	82.17	33.95	3.87	24.40	18.4
1973	4,260	83.54	31.55	4.35	17.87	14.2
1974	5,937	79.13	32.01	3.25	13.33	11.2
1975	8,456	71.51	40.55	3.38	14.01	12.0
1976	10,533	71.09	36.73	3.50	12.85	10.6
1977	12,648	70.63	33.79	3.58	13.33	10.2
1978	14,871	74.08	29.71	4.16	16.38	12.1
1979	20,500	67.80	31.75	4.03	17.68	13.3
1980	27,365	61.22	44.68	4.81	17.13	13.1
1981	32,490	63.80	48.34	5.53	17.98	13.8
1982	37,295	61.94	52.65	6.23	21.15	15.5
1983	40,094	70.58	53.23	6.18	20.07	15.0
1984	43,100	73.55	53.16	6.74	20.75	17.3

^aMerchandise exports.

^bReceipts from visible and invisible foreign transactions.

Sources: Bank of Korea and Economic Planning Board.

Table 5

Cost of Foreign Capital
(annual averages)

	<u>1966-70</u>	<u>1971-75</u>	<u>1976-80</u>	<u>1981-83</u>	Unit: %
I. Domestic Bank Lending Rate ^a	24.4	17.0	18.0	12.5	
(Curb Market Interest Rate)	(54.2)	(40.1)	(41.3)	(30.6)	
II. Foreign Interest Rate ^b	6.4	7.9	11.5	11.1	
III. Foreign Inflation Rate (GNP Deflator) ^c	4.9	8.4	5.9	4.1	
IV. Exchange Rate Depreciation ^d	5.1	7.8	5.5	10.1	
V. GDP Deflator (Rate of Change): Korea ^e	14.6	18.7	19.7	9.9	
<hr/>					
VI. Real Foreign Interest Rate (II-III)	1.5	-0.5	5.6	7.0	
VII. Interest Rate Differential Between Home and Foreign Markets (I - II - IV)	12.9	1.3	1.0	-8.7	
VIII. Real Private Cost of Borrowing Abroad (II + IV - V)	-3.1	-3.0	-2.7	11.3	

^aDiscounts on bills of Deposit Money Banks (three year moving averages).

^bLIBOR (90 days).

^cAverage of Japan and United States.

^dBOK standard concentration rate (three year moving averages).

^eThree year moving averages.

Source: Bank of Korea, Monthly Bulletin, various issues, as cited by Yung Chul Park, 1985.

Table 6

Saving, Investment and Consumption, 1962-1984 as % of GNP

	Investment (1)=(2)+(3)	Gross Fixed Capital Formation (2)	Increase in Stocks (3)	Saving (4)=(5)+(6)+(7)	General Government (5)	Public and Private Corporations (6)	Household and Private Nonprofit Institutions (7)	Deficit of the Nation on Current Account (8)	Difference Between Investment(1) and Saving(4) (9)=(1)-(4)
1962	13.04	13.95	-0.90	11.58	4.63	7.91	-0.97	1.86	-1.47
1963	18.38	13.94	4.43	15.63	4.41	7.76	3.45	4.05	-2.75
1964	14.53	11.56	2.97	15.22	4.61	7.00	3.61	0.84	0.69
1965	14.70	14.60	0.10	14.09	5.83	8.07	0.18	-0.16	-0.61
1966	21.62	19.96	1.66	17.56	5.68	7.72	4.15	2.72	-4.06
1967	21.91	21.25	0.66	16.36	6.83	8.16	1.38	4.18	-5.55
1968	26.74	25.54	1.20	19.43	8.17	8.19	3.06	7.73	-7.31
1969	30.02	26.74	3.29	22.78	7.36	7.97	7.45	7.73	-7.25
1970	27.98	25.60	2.39	18.80	7.62	7.67	3.51	7.59	-9.18
1971	25.13	21.52	3.61	16.27	5.57	7.53	3.17	8.73	-8.86
1972	22.22	20.00	2.22	18.06	3.64	8.72	5.70	3.48	-4.16
1973	25.68	23.38	2.30	24.14	3.99	11.17	8.98	2.29	-1.54
1974	31.65	25.31	6.34	20.65	2.25	11.36	7.04	10.93	-11.00
1975	30.02	25.50	4.53	20.18	3.76	9.81	6.61	9.05	-9.84
1976	25.62	24.09	1.54	25.07	6.05	10.21	8.81	1.09	-0.55
1977	27.75	26.66	1.08	28.09	5.11	10.68	12.30	-0.03	0.34
1978	31.19	30.81	0.38	29.40	6.17	9.94	13.28	2.17	-1.78
1979	35.65	32.77	2.88	28.78	6.74	9.75	12.29	6.43	-6.87
1980	31.26	31.91	-0.66	22.59	5.67	10.29	6.63	8.67	-8.67
1981	29.15	28.85	0.29	22.42	6.12	9.34	6.96	6.91	-6.73
1982	27.00	30.27	-3.27	23.09	6.18	9.69	7.23	3.77	-3.90
1983	27.77	31.84	-4.07	25.63	7.46	10.28	7.89	2.09	-2.14
1984	29.98	30.95	-0.97	28.00	7.64	10.43	9.93	1.68	-1.98

Note: All values as % of GNP.
(8) Negative value: surplus.

Source: Bank of Korea.

Table 6a

Components of Fixed Capital Formation
as % of Total Capital Formation

<u>Year</u>	<u>Gross Domestic Fixed Capital Formation</u> (1)+(2)+(3)	<u>General Government</u> (1)	<u>Public and Private Corporations</u> (2)	<u>Household and Private Nonprofit Institutions</u> (3)
1962	100	37.1	70.6	-7.7
1963	100	39.4	29.8	30.8
1964	100	37.6	32.9	29.5
1965	100	41.7	57.0	1.3
1966	100	35.7	38.2	26.1
1967	100	43.5	47.7	8.8
1968	100	44.8	38.4	16.8
1969	100	37.8	24.0	38.2
1970	100	46.4	32.2	21.4
1971	100	44.0	31.0	25.0
1972	100	23.0	41.0	36.0
1973	100	18.3	40.6	41.1
1974	100	15.7	35.1	49.2
1975	100	24.0	33.7	42.2
1976	100	25.7	36.9	37.4
1977	100	18.9	35.5	45.5
1978	100	21.3	33.0	45.8
1979	100	26.0	26.5	47.5
1980	100	24.4	47.1	28.5
1981	100	27.7	40.9	31.4
1982	100	23.4	49.2	27.4
1983	100	25.1	48.3	26.6
1984	100	26.4	39.4	34.3

Source: Bank of Korea.

Table 7

Monetary Indicators

<u>Year</u>	<u>M1^a</u> <u>% Increase</u>	<u>Broad Money</u> <u>M2^b</u> <u>% Increase</u>	<u>Domestic</u> <u>Credit^c</u> <u>% Increase</u>	<u>Discount</u> <u>Rate^d</u>	<u>Inflation</u> <u>Rate</u> <u>in CPI</u>
1962	14.5	27.2	41.6	10.22	6.1
1963	6.3	8.8	19.7	10.22	20.0
1964	16.7	14.3	8.8	10.50	29.8
1965	34.2	52.7	40.1	28.00	14.7
1966	29.7	61.0	30.5	28.00	11.2
1967	44.5	61.7	78.2	28.00	10.8
1968	44.6	72.0	84.8	23.00	10.4
1969	41.7	61.4	59.2	22.00	12.4
1970	22.1	27.3	26.5	19.00	16.2
1971	16.4	20.8	31.1	16.00	13.5
1972	45.1	33.8	30.4	11.00	11.5
1973	40.6	35.9	31.7	11.00	3.2
1974	29.5	24.5	54.2	11.00	24.5
1975	25.0	28.2	32.2	14.00	25.2
1976	30.6	33.5	21.7	14.00	15.3
1977	40.7	39.7	23.6	14.00	10.2
1978	24.9	35.0	45.9	15.00	14.5
1979	20.7	24.6	35.6	15.00	18.3
1980	16.3	26.9	41.9	16.00	28.7
1981	4.6	25.0	31.2	11.00	21.3
1982	45.6	27.0	25.0	5.00	7.3
1983	17.0	15.2	15.7	5.00	3.4
1984	0.5	7.7	13.2	5.00	2.3

^aM1 = currency in circulation + deposit money.

^bM2 = M1 + quasi-money (time and savings deposits).

^cDomestic credit is defined as BOK's claims on government, government agencies, and private sector.

^dDiscount rate is the rate of discount for commercial bills of prime enterprises.

Source: Bank of Korea.

Table 8

Decomposition of GNP Growth Rate
(real growth rates)

<u>Year</u>	<u>GNP</u>	<u>C</u>	<u>I</u>	<u>G</u>	<u>X</u>	<u>M</u>	<u>NFI</u>
1962	2.2	5.7	6.9	0.9	12.5	32.0	11.9
1963	9.1	3.3	76.0	4.8	7.4	27.4	4.8
1964	9.6	5.6	-16.7	-3.6	23.6	-25.6	-3.8
1965	5.8	7.8	3.6	6.8	40.7	13.1	17.2
1966	12.7	7.2	75.0	11.5	52.3	57.7	71.0
1967	6.6	9.3	16.6	10.2	35.7	34.8	64.6
1968	11.3	11.4	42.4	13.1	41.6	45.9	3.3
1969	13.8	11.0	31.2	12.2	31.9	24.7	3.6
1970	7.6	11.1	0.9	6.7	22.9	10.0	-55.9
1971	8.8	10.4	6.3	10.7	20.5	20.4	-117.0
1972	5.7	5.1	-10.2	2.9	36.6	0.9	-164.4
1973	14.1	9.2	31.5	1.7	55.3	36.7	336.7
1974	7.7	7.6	29.9	10.1	-2.8	16.9	69.3
1975	6.9	5.6	1.7	4.3	15.9	0.1	127.4
1976	14.1	8.3	16.3	5.9	41.6	27.0	-114.7
1977	12.7	6.8	23.2	9.1	22.6	23.4	1,310.4
1978	9.7	9.9	22.8	13.0	19.9	29.0	-13.0
1979	6.5	8.9	19.7	0.1	-3.8	8.6	-49.8
1980	-5.2	-0.8	-23.7	6.8	9.7	-7.3	-334.0
1981	6.2	3.4	2.2	2.2	17.3	5.3	50.9
1982	5.6	4.6	5.0	2.2	6.2	2.3	0.7
1983	9.5	6.6	13.7	4.7	13.8	11.1	6.9
1984	7.6	5.7	11.9	2.3	8.1	6.8	25.8

Notes: Growth rates are calculated from data in won, corrected by the GNP deflator.

- C = Consumption.
- I = Investment.
- G = Government spending.
- X = Exports.
- M = Imports.
- NFI = Net factor income.

Source: Bank of Korea.

Table 9

Share of Heavy and Chemical Industry in
Manufacturing Output and Merchandise Exports

(in percent)

		<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Heavy and Chemical Industry	(1)	40.5	39.7	42.6	49.9	47.5	49.5	50.7	53.0	54.9	56.3	57.7	58.3	59.3	61.9
	(2)	13.7	21.1	23.6	33.2	25.9	28.8	31.6	33.2	37.7	39.9	42.1	49.2	54.3	59.7
Chemical	(3)	56.2	52.2	44.8	46.9	54.3	48.1	43.8	39.6	41.0	49.3	46.9	45.0	42.2	39.2
	(4)	14.2	14.7	10.2	12.9	13.2	11.1	10.2	8.5	9.8	11.6	9.5	9.5	9.8	10.7
Basic Metal ^a	(3)	14.5	15.4	19.7	18.1	13.3	14.5	15.2	14.7	16.0	16.6	16.7	16.4	16.2	17.0
	(4)	26.5	34.2	33.4	38.8	28.1	27.4	31.3	27.1	31.8	36.6	34.9	30.5	26.9	22.8
Mach. and Trans. Equip.	(3)	29.4	32.4	35.5	34.9	32.4	37.4	41.1	45.7	43.0	34.1	36.4	38.6	41.6	43.8
	(4)	59.4	51.1	56.4	48.3	58.8	61.5	58.4	64.3	58.4	51.8	55.6	59.9	63.4	66.5
Light Industry	(1)	59.5	60.3	57.4	50.1	52.5	50.5	49.3	47.0	45.1	43.7	42.3	41.7	40.7	38.1
	(2)	86.3	78.9	76.4	66.8	74.1	71.2	68.4	66.8	62.3	60.1	57.9	50.8	45.7	40.3

(1) Share in total manufacturing output.

(2) Share in total merchandise export.

(3) Share of output in heavy and chemical industry.

(4) Share of export in heavy and chemical industry.
Heavy includes consumer electronics.^a Iron and steel and nonferrous metals.

Source: Economic Planning Board.

Table 10

Import Content of Exports, Consumption and Investment^a
(%)

	<u>1970</u>	<u>1973</u>	<u>1975</u>	<u>1978</u>	<u>1980</u>	<u>1983</u>
Consumption	13	17	19	17	23	22
Investment	39	45	48	48	42	35
Exports	26	35	36	36	38	36

^aThe import content of a final demand component is defined as:

$$A^m (I - A^d)^{-1} Y^d + Y^m$$

where:

- A^m : import coefficient matrix
- A^d : domestically produced input coefficient matrix
- Y^d : final demand for domestically produced goods and services
- Y^m : final demand for imported goods and services

Source: The Bank of Korea; Yung Chul Park and Dornbusch, 1986.

Table 11

Invisible Exports and Exports to the Middle East
(Unit: US\$ in millions, except percentage value)

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Other Goods, Services and Income (1)	368	387	903	1,959	3,073	3,105	2,819	3,345	3,882	3,579	3,494
% of (1) in Total Merchandise Exports	8.1	7.7	11.6	19.5	24.2	21.1	16.4	16.2	18.6	15.4	13.3
Construction Contract Value in the Middle East	NA	NA	NA	3,623	7,982	6,358	7,953	13,515	10,692	8,854	5,911
Merchandise Exports to the Middle East (2)	101	251	676	920	958	932	1,195	1,345	1,386	2,003	1,247
% of (2) in Total Merchandise Exports	2.2	5.0	8.7	9.2	7.5	6.3	6.9	6.5	6.6	8.6	4.7

Note: (1) is one of the items of invisible trade balance (the value of credit-receipts). Includes government transactions.

(2) 1974-1976 value includes Iran, Kuwait and Saudi Arabia only.

1977-1984 value includes Kuwait and Saudi Arabia only.

NA = not available.

Source: Bank of Korea and Ministry of Finance.

Table 12

Textiles Exports

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Textiles Exports as % of Total Merchandise Export	33.8	36.8	36.5	28.7	30.0	29.3	27.5	28.3	26.7	24.5	25.2
Growth Rate of Merchandise Exports	37.5	10.8	56.2	28.6	26.5	15.7	17.1	20.1	1.0	11.1	13.5
Growth Rate of Textiles Exports	19.4	20.6	54.9	1.1	32.4	12.9	9.8	23.7	-4.5	1.7	16.6

Note:

Textiles: Textiles fibres and their wastes, textiles yarn, fabrics, made-up articles and related products, articles of apparel and clothing accessories.

Table 13
Average Annual Rate of Change in Inflation and in Its Determinants, 1964-1984^a
(percentages)

	<u>1965-</u> <u>1973</u>	<u>1974-</u> <u>1975</u>	<u>1976-</u> <u>1977</u>	<u>1978-</u> <u>1979</u>	<u>1980-</u> <u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
<u>Inflation</u>								
CPI	11.55	24.77	12.70	16.41	25.01	7.19	3.42	2.27
WPI	8.78	34.30	10.60	15.21	29.64	4.65	0.24	0.71
PVI ^b	14.35	27.20	18.13	21.29	22.02	8.49	3.13	2.99
<u>Determinants</u>								
Manufacturing Wages	20.45	31.16	34.25	31.48	21.39	14.86	12.00	8.32
Agriculture Prices	12.56	34.86	22.22	22.57	26.07	0.31	3.36	-0.08
Price of Imported Materials (won)	11.98	27.92	1.58	16.35	37.55	1.33	1.22	4.01
Price of Imported Oil	18.84	135.18	6.05	21.91	72.16	2.51	-6.56	0.40
Price of Nonoil Materials	11.60	18.10	0.40	14.77	25.55	0.68	5.72	5.85
M2	46.44	26.55	33.07	33.04	26.61	28.15	19.52	10.74
Bank Credit	42.99	42.54	23.34	40.54	35.82	25.11	15.99	13.08

^aThese are arithmetic averages.

^bPVI denotes the nonagriculture GNP deflator.

Source: Corbo and Nam, 1986.

Table 14

Inflation and Wages in Manufacturing
(Rates of Change in Percent)

		<u>1965-1973</u>	<u>1974-1975</u>	<u>1976-1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Consumer Price Index		11.6	24.8	12.7	14.5	18.3	28.7	21.3	7.2	3.4	2.3
Wholesale Price Index		8.8	34.3	10.6	11.6	18.8	38.9	20.4	4.7	0.2	0.7
Total Wage	N(1)	21.6	31.2	34.3	34.7	36.6	19.1	20.0	14.7	11.3	8.2
	R(2)	9.8	5.1	19.5	20.2	18.3	-9.6	-1.3	7.5	7.9	5.9
Production Workers	N	18.3 (3)	27.7	29.1	35.3	38.9	18.2	21.7	14.1	10.8	10.0
	R	12.5 (4)	2.9	16.4	20.8	20.6	-10.5	0.4	6.9	7.4	7.7
Technicians	N	24.1 (3)	30.8	31.4	34.5	30.3	13.9	13.8	20.0	8.5	7.4
	R	18.3 (4)	6.0	18.7	20.0	12.0	-14.8	-7.5	12.8	5.1	5.1
Managers	N	22.5 (3)	35.4	26.9	33.0	38.2	8.6	12.5	8.4	10.5	7.1
	R	16.7 (4)	10.6	14.2	18.5	19.9	-20.1	-8.8	1.2	7.1	4.8
Labor Productivity		13.0	10.5	10.6	11.5	15.4	10.5	16.9	7.2	13.0	10.0
Unit Labor Cost (5)		7.7	18.8	21.4	20.5	11.4	11.1	10.0	-0.8	-1.5	-1.7

Note: All the values are arithmetic averages.

(1) Nominal.

(2) Real (nominal minus CPI).

(3) 1973 and 1974 only.

(4) 1973 and 1974 only; this value is nominal minus CPI.

(5) Rate of increase of nominal wage index/labor productivity index.

Source: Office of Labor Affairs (until 1980) and Ministry of Labor.
Bank of Korea.

Table 15

The Balance of Payments, 1978-85
(unit: billion \$)

<u>Year</u>	<u>Current Account</u>	<u>Trade Balance</u>			<u>Invisibles</u>	
		<u>Net</u>	<u>Exports</u>	<u>Imports</u>	<u>Net</u>	<u>Interest</u>
1978	-1.1	-1.8	12.7	14.5	0.2	1.0
1979	-4.2	-4.4	14.7	19.1	-0.2	1.5
1980	-5.3	-4.4	17.2	21.6	-1.4	2.6
1981	-4.6	-3.6	20.7	24.3	-1.5	3.5
1982	-2.6	-2.6	20.9	23.5	-0.6	3.6
1983	-1.6	-1.8	23.2	25.0	-0.4	3.2
1984	-1.4	-1.0	26.3	27.4	-0.9	3.8
1985	-0.9	-0.0	26.4	26.4	-1.4	3.6

Source: Bank of Korea.

Table 16

Government Fiscal Operations, 1979-84

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Central Government						
Revenue	17.4	18.4	18.8	19.3	19.7	19.3
Expenditure	19.2	20.6	22.3	22.5	20.9	20.6
Deficit	1.7	2.2	3.5	3.2	1.2	1.3
Public Sector ^a						
Revenue	18.5	19.6	20.2	19.4	19.9	20.0
Expenditure	19.9	22.8	24.8	23.7	21.5	21.4
Deficit	1.4	3.2	4.6	4.3	1.6	1.4
Financing	1.4	3.2	4.6	4.3	1.6	1.4
Domestic	0.6	2.3	3.4	3.0	0.9	0.9
Bank ^b	-0.4	1.0	2.0	0.6	-0.4	-0.1
Nonbank	1.0	1.3	1.4	2.4	1.3	1.0
Foreign	0.8	0.9	1.2	1.3	0.7	0.5

^aThe figures for the public sector are not corrected for changes in definition. The removal of the Korea Telecommunications Authority from the accounts in 1982 reduced revenue and expenditure by more than 1 percent of GNP, and the overall deficit, by 0.2 percentage point of GNP. The removal of the Civil Servants Pension Fund and Special Account in 1983 reduced both revenue and expenditure by almost 1 percent of GNP and the overall deficit by 0.1 percentage point of GNP.

^bBank financing as defined in the monetary survey; domestic nonbank financing includes small discrepancies between cash and accrual accounting in the fiscal presentation.

Sources: Korean Ministry of Finance and Fund staff estimates, as cited in Aghevli and Marquez-Ruarte (1985).

Table 17

Changes in Concentration of Economic Power
(units: %)

	Shipment			Employment		
	<u>1974</u>	<u>1977</u>	<u>1982</u>	<u>1974</u>	<u>1977</u>	<u>1982</u>
Top 5 Corporate Groups		15.7	22.6		9.1	8.4
Top 10 Corporate Groups		21.2	30.2		12.5	12.2
Top 15 Corporate Groups		25.6	33.9		14.4	14.5
Top 20 Corporate Groups	24.6	29.3	36.6	13.5	17.4	16.0
Top 25 Corporate Groups		31.9	38.8		18.9	17.1
Top 30 Corporate Groups		34.1	40.7		20.5	18.6

Source: Compiled from the Census of Manufacturing database, EPB, as cited in Kyu-Uck Lee, et al. (1986).

Table 18

Business Concentration Ratio (BCR) in Korea (1974-1984)

<u>BCRn^a</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
BCR1	4.9	4.3	4.7	7.9	6.9	8.3	8.3	10.5	10.4	11.8	12.0
2	7.2	7.5	8.1	12.5	12.9	12.8	16.3	19.1	19.0	21.2	24.0
3	9.0	9.8	11.3	16.0	16.9	17.6	23.9	27.6	27.4	30.5	35.8
4	10.3	11.4	12.9	18.2	20.7	22.1	30.1	35.2	35.6	38.7	44.3
5	11.6	12.8	14.5	19.8	22.9	24.6	35.0	41.3	42.2	46.7	52.4
6	12.7	14.1	16.1	21.3	24.7	26.6	38.2	44.9	46.0	51.0	56.2
7	13.5	15.3	17.5	22.8	26.4	28.5	41.0	48.0	49.2	54.2	59.4
8	14.3	16.2	18.4	24.0	27.7	30.3	43.6	50.9	52.2	57.1	62.1
9	14.7	16.7	19.3	25.2	28.9	31.6	46.0	53.3	55.1	59.8	64.8
10	15.1	17.1	19.8	26.0	30.1	32.8	48.1	55.7	57.6	62.4	67.4

^aBCRn is defined as (total sales figure of top n groups/GNP) x 100 for each year.

Source: Kim, Seok Ki (In process).

Table 19
Access to Borrowing by Each Sector^a

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Total Manufacturing	45.41%	43.21%	45.22%	40.27%	40.97%	41.32%	39.29%	36.94%	38.55%	38.05%	32.53%	30.81%	28.17%
Large Firms	45.72	43.55	45.65	40.93	41.36	41.38	39.69	37.32	39.25	38.81	32.26	30.76	27.84
Small Firms	27.27	26.54	24.44	27.38	34.98	40.79	37.02	34.60	33.79	34.31	33.87	31.19	30.40
Small Minus Large	-18.45	-17.00	-21.20	-13.56	-6.38	-0.59	-2.67	-2.72	-5.46	-4.50	1.61	0.43	2.56
Export Industry	47.13	45.95	49.78	45.07	43.11	44.06	42.85	41.10	48.57	45.63	38.07	35.53	32.28
Domestic Industry	44.63	41.75	42.93	36.62	39.91	39.83	37.54	35.24	31.66	32.84	29.00	28.08	25.98
Export Minus Domestic	-2.50	-4.20	-6.85	-8.45	-3.20	-4.23	-5.31	-5.86	-16.90	-12.79	-9.07	-7.44	-6.29
Heavy Industry	49.20	43.43	41.25	38.52	41.59	42.53	41.60	37.07	39.67	40.86	32.81	31.08	27.72
Light Industry	42.30	43.02	49.05	41.96	40.32	40.04	35.94	36.79	37.11	33.89	32.13	30.41	28.96
Light Minus Heavy	-6.91	-0.42	7.79	3.44	-1.27	-2.48	-5.66	-0.28	-2.56	-6.96	-0.68	-0.67	1.25

^aThe figures are the ratios of total bank loans and foreign loans over total asset of each sector.

Source: Financial Statement Analysis, BOK, various issues, as cited by Cho and Cole, 1986.

Table 20
Average Cost of Borrowing by Each Sector^a

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Total Manufacturing	12.00	8.60	10.50	11.30	11.90	13.10	12.40	14.40	18.70	18.37	15.97	13.63	14.42
Large	11.98	8.48	10.49	11.19	11.80	11.91	11.91	14.42	18.42	18.30	16.08	13.71	14.45
Small	14.16	11.59	11.41	13.92	14.39	13.80	15.55	14.16	20.74	18.77	15.38	12.95	14.13
Small Minus Large	2.18	3.11	0.92	2.73	2.59	1.89	3.64	-0.26	2.32	0.47	-0.70	-0.76	-0.32
Export Industry	11.06	9.78	9.82	9.82	11.34	12.87	12.68	15.70	16.01	15.81	13.55	12.39	12.91
Domestic Industry	12.46	9.84	10.88	12.60	12.25	13.24	12.25	13.8	21.03	20.36	17.59	14.37	15.20
Export Minus Domestic	1.40	0.06	1.06	2.78	0.91	0.37	-0.43	-1.90	5.02	4.55	4.04	1.98	2.29
Heavy Industry	10.53	8.65	10.38	10.24	10.14	11.50	10.09	12.51	17.58	17.49	15.29	12.93	14.39
Light Industry	13.31	10.90	10.59	12.16	13.70	14.29	15.85	16.62	20.05	19.64	16.93	14.63	14.46
Light Minus Heavy	2.78	2.25	0.21	1.92	3.56	2.79	5.76	4.11	2.47	2.15	1.64	1.70	0.07
GNP DFL	16.11	13.40	29.54	25.73	20.73	15.67	21.89	21.16	25.63	15.90	7.08	2.90	3.90

^aThe interest paid plus discount divided by total borrowing which includes all sources of borrowing, i.e., bank, NBF1, bond, foreign, and etc.

Source: Financial Statement Analysis, BOK, various issues, as cited by Cho and Cole, 1986.

Table App 1

Foreign Investments and Loans
(in thousand dollars)

	<u>Total</u>	<u>%</u>	<u>Total Loans</u>	<u>%</u>	<u>Public Loan</u>	<u>%</u>	<u>Commercial Loans</u>	<u>%</u>	<u>Foreign Investment</u>	<u>%</u>
1964	33,203	100.0	30,153	90.8	11,088	33.4	19,065	57.4	3,050	0.2
1965	49,838	100.0	39,097	78.4	11,209	22.5	27,888	56.0	10,741	21.6
1966	177,239	100.0	172,417	97.3	62,758	35.4	109,659	61.9	4,822	2.7
1967	120,212	100.0	217,545	94.5	79,755	34.6	137,790	59.9	12,667	5.5
1968	378,989	100.0	364,247	96.1	112,133	29.6	252,114	66.5	14,739	3.9
1969	515,910	100.0	508,950	98.7	148,092	28.7	360,858	69.9	6,960	1.3
1970	454,885	100.0	429,613	94.4	146,658	32.2	282,955	62.2	25,272	5.6
1971	680,794	100.0	644,078	94.6	324,535	47.7	319,543	46.9	36,716	5.4
1972	797,321	200.0	736,089	92.3	437,535	54.9	293,554	37.4	61,232	7.7
1973	1,022,688	100.0	864,253	84.5	403,398	39.5	460,655	45.0	158,435	15.5
1974	1,150,963	100.0	988,334	85.9	385,259	33.5	603,075	52.4	162,629	14.1
1975	1,347,514	100.0	1,278,344	94.9	476,923	35.4	801,521	59.5	69,170	5.1
1976	1,657,480	100.0	1,551,906	93.6	712,994	43.0	838,912	50.6	105,574	6.4
1977	1,981,342	100.0	1,879,056	94.8	637,051	32.2	1,241,105	62.6	102,286	5.2
1978	2,831,601	100.0	2,731,144	96.5	817,944	28.9	1,913,200	67.6	100,457	3.5
1979	2,794,693	100.0	2,667,716	95.5	1,089,220	39.0	1,578,496	56.5	126,977	4.5
1980	3,015,521	100.0	2,918,886	96.8	1,516,497	50.3	1,402,389	46.5	96,635	3.2
1981	3,042,054	100.0	2,936,606	96.5	1,689,527	55.5	1,247,079	41.0	105,448	3.5
1982	2,882,357	100.0	2,781,759	96.5	1,868,086	64.8	913,673	31.7	100,598	3.5
1983	2,568,330	100.0	2,466,856	96.1	1,493,413	58.2	972,483	37.9	101,434	3.9

Source: Ministry of Finance.

Table App 2

Labor Force and Employment, Nonfarm and Farm Households

1970-1985

Year	Population 14 Years and over (1,000)	Economically Active Population (1,000)	Labor Force Participation Rate			Employed (1,000)	Unemploy- ment Rate (%)
			Average	Male (%)	Female		
<u>Nonfarm</u>							
1970	9,713	5,001	51.5	75.1	29.8	4,629	7.4
1975	12,779	6,667	52.2	75.1	31.2	6,228	6.6
1976	13,421	7,147	53.3	74.7	33.7	6,700	6.3
1977	14,313	7,731	54.0	76.9	33.5	7,281	5.8
1978	15,290	8,347	54.6	75.3	35.6	7,953	4.7
1979	16,186	8,804	54.4	74.4	35.9	8,308	5.6
1980	17,066	9,285	54.4	74.2	36.1	8,592	7.5
1981	17,656	9,507	53.8	73.7	35.4	8,891	6.5
1982	18,683	10,226	54.7	73.4	37.5	9,612	6.0
1983	19,559	10,597	54.2	71.8	37.9	10,021	5.4
1984	21,044	10,982	52.2	69.6	36.1	10,446	4.9
1985	22,061	11,718	53.1	69.8	37.7	11,140	4.9
<u>Farm</u>							
1970	8,540	5,198	60.9	75.2	48.2	5,516	1.6
1975	9,054	5,673	62.7	73.8	51.8	5,602	1.3
1976	9,128	5,914	64.8	74.5	55.3	5,856	1.0
1977	9,023	5,709	63.3	74.3	52.5	5,648	1.1
1978	8,734	5,585	63.9	74.5	54.0	5,537	0.9
1979	8,492	5,402	63.6	73.5	54.2	5,356	0.9
1980	8,269	5,169	62.5	72.4	53.0	5,114	1.1
1981	8,313	5,202	62.6	72.1	53.4	5,158	0.9
1982	7,848	4,854	61.9	70.4	53.6	4,812	0.9
1983	7,571	4,531	59.8	68.7	51.3	4,494	0.8
1984	6,749	4,002	59.3	68.8	50.1	3,971	0.8
1985	6,428	3,836	59.7	68.9	50.7	3,795	1.1

Sources: Economic Planning Board (EPB).

Table App 3

Relative Capacity Utilization Rate^a
by Industry, 1978, 1980 and 1984
(unit: %)

	<u>1978</u>	<u>1980</u>	<u>1984</u>
Manufacturing	100.0	100.0	100.0
Food, beverages & tobacco	98.1	98.6	91.8
Textile & leather products	104.2	115.5	98.1
Wood products	138.4	87.9	63.8
Rubber products	123.0	115.0	94.0
Coal products	NA	95.0	88.6
Precision & scientific equipment	NA	75.5	82.0
<hr/>			
Paper products	106.1	108.8	102.0
Industrial chemicals	123.1	122.3	109.1
Other chemical products	124.0	108.6	92.2
Petroleum refineries	131.1	119.4	87.6
Nonmetallic mineral products	108.6	91.8	96.9
Iron and steel	107.3	107.2	109.1
Nonferrous metal products	87.1	81.7	101.4
Fabricated metal products	NA	56.5	66.7
General machinery	85.3	67.3	80.4
Electrical machinery	95.1	94.0	108.7
Transport equipment	48.4	60.3	97.6

^aThe capacity utilization rate relative to the manufacturing average.

Source: Economic Planning Board Bureau of Statistics, as cited by Soogil Young and S.S. Rhee (1986).

Table App 4

Capacity Utilization Rate by Industry: 1976-84

	1976	1977	1978	1979	1980	1981	1982	1983	1984
Manufacturing	74.7	77.1	83.4	77.5	69.5	70.3	69.4	75.8	80.6
Food, beverages & tobacco	59.7	72.2	81.8	78.5	69.2	64.1	64.9	73.4	74.0
Textile & leather products	89.7	87.9	86.9	84.2	80.3	80.9	80.2	79.0	79.1
Wood products	98.7	110.0	115.4	98.3	61.1	59.9	46.5	45.4	51.4
Rubber products	83.3	94.8	102.6	96.5	79.9	68.1	66.6	74.1	75.8
Coal products		NA			66.0	65.9	62.1	64.9	71.4
Precision & scientific equipment		NA			52.5	57.1	59.6	60.8	66.1
Paper products	73.0	80.9	88.5	85.2	75.6	74.8	72.5	76.3	82.3
Industrial chemicals	88.7	88.8	102.7	86.4	85.0	86.3	80.0	82.6	87.9
Other chemical products	81.2	92.0	103.4	85.2	75.5	72.6	72.3	76.2	74.3
Petroleum refineries	85.7	100.4	109.3	94.3	83.0	71.2	61.5	68.1	70.6
Nonmetallic mineral products	85.6	92.1	90.6	80.4	63.8	61.4	68.2	77.7	78.1
Iron & steel products	79.4	80.8	89.5	81.7	74.5	70.8	75.3	84.0	87.9
Nonferrous metal products	70.3	78.4	72.6	69.6	56.8	68.2	69.0	79.2	81.7
Fabricated metal products		NA			39.3	44.8	43.3	46.9	53.8
General machinery	71.4	68.8	71.1	77.3	46.8	51.4	52.4	69.0	64.8
Electrical machinery	83.3	80.1	79.3	83.3	65.3	69.0	65.2	76.3	87.6
Transport equipment	36.8	33.4	40.4	38.8	41.9	58.2	58.1	58.7	78.7

Source: Economic Planning Board Bureau of Statistics, as cited by Soogil Young and S.S. Rhee (1986).