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EXTERNAL DEBT AND MACROECONOMIC
PERFORMANCE IN SOUTH KOREA

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External Debt and Macroeconomic Performance in South Korea:
A Summary

Abstract

During 1980-1986, South Korea went from being the world's fourth largest debtor country, in the midst of an economic crisis, to a model of successful adjustment, with high growth rates and a current account surplus. This paper summarizes the findings of an in depth analysis of Korea's performance, focusing on the experience with external debt.

We argue that the explanations for Korea's recovery are closely linked to the explanations for Korea's very rapid growth during the 1960s and 1970s. The centerpieces have been a comprehensive export focused investment plan with external borrowing used to supplement domestic savings in financing the investment and an active, interventionist government policy.

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I. Introduction

In 1981, South Korea was the world's fourth largest debtor country and in the midst of an economic crisis. She had accumulated \$17.6 billion of debt within three years, raising her debt stock to \$32.4 billion and her debt/GDP ratio to 49 percent. Output had declined by 4.8 percent in 1980, compared to average growth rates in excess of 9 percent during 1970-1979. Inflation had doubled from 14.4 percent in 1978 to 28.7 percent in 1980.

Korea's adjustment to the 1979-1982 debt crisis has been remarkable. By 1986, she had substantially reduced the debt burden. Inflation had fallen to just three percent, while the government budget deficit had been cut in half. Exports grew by 15 percent, fueling a 12.5 percent increase in output, and a current account surplus nearly 5 percent of GNP. At the same time, real wages, per capita income and consumption all increased, and the country maintained historically high levels of fixed capital formation.

In stark contrast, the 1986 World Development Report (p. 54) describes the plight of seventeen of the middle income debtor countries as follows:

"The bulk of the adjustment has been undertaken through lower demand, which has meant, in practice, reducing imports and investment....GDP has stagnated since 1980, and per capita incomes have declined substantially. ...Yet the main indicators of debt at the end of 1985 were close to their previous peaks. Despite their adjustment efforts, these countries seem to be as far as they ever were from reconciling growth and credit worthiness."

The purpose of this paper is to summarize the findings of an in depth analysis of Korea's macroeconomic performance, policy and prospects, with

primary focus on the experience with external debt.¹ The paper begins with an overview of Korea's experience. Four questions arise from our summary:

1. What caused Korea's debt crises?
2. How was Korea able to achieve rapid, successful recoveries?
3. What role has external borrowing played in the experience?
- and 4. Are there lessons for other debtor countries?

Answering these questions involves synthesizing a number of interrelated factors. In Section III, we summarize our conclusions about each of these pieces individually. Section IV puts the pieces of the puzzle together and examines the implications, answering questions 1-3. The final sections discuss the lessons to be learned and the prospects for Korea.

II. Overview of Macroeconomic Experience

Korea's macroeconomic history can be divided roughly into five periods. The early period, from 1945 to 1953, was one of continued disruption. First came the division into North and South Korea at the 38th parallel after World War II. The South was left with rich agricultural lands and light manufacturing industries, but almost no heavy industry or power facilities. Attempts to begin economic recovery were interrupted by the devastation of the Korean War which is estimated to have killed over one million people and destroyed over one third of South Korea's physical capital.

Another development during this period, with lasting implications for Korean development, was a major land reform. During 1947-1949, farmland previously owned by Japanese landlords, was either redistributed or sold, dramatically decreasing the concentration of land ownership. This development

is perhaps the most important factor in explaining the relatively egalitarian distribution of income in Korea.

The second period, (1953-60) was one of slow recovery, financed by massive foreign aid, primarily from the United States. Foreign aid inflows averaged nearly US \$300 million per annum during 1955-59, reaching 16 percent of GNP in 1957. Inflation rates jumped to 60 percent immediately following the War, while output growth remained moderate. Under the complex system of trade restrictions erected by the Syngman Rhee dictatorship, exports grew by only 1.3 percent per year.

In contrast, the third period, from 1960-73, saw a dramatic economic turn-around fueled by rapid rates of export growth. Exports grew by 40-50 percent per year during 1960-74 while output grew by 10 percent during 1965-74.

The economic transition coincided with a change in political regime and economic policy. Syngman Rhee was forced to resign in 1960 after a student uprising. The new government, led by Chang Myon, collapsed in May 1961 following a military coup led by General Park Chung Hee, who remained President of Korea until a second coup in 1979.

Under General Park, Korea switched from an import-substitution strategy to an active export-promotion strategy. The first of a series of Five-Year Plans, initiated in 1962, identified investment and export-led economic growth as the number one priorities. Other hallmarks of the strategy were extensive government intervention in domestic and international capital markets, the development of close links between government and industry, import liberalization and the more active use of exchange rates to maintain competitiveness.

Table 1
Korea's External Debt, 1960-85
(million of U.S. dollars)

Debt	1961	1962	1963	1964	1965	1966	1967	1968	1969
Total Foreign Debt	83	89	157	177	206	392	645	1,199	1,800
Foreign Direct Investment	-	1	3	6	16	21	34	49	56
Foreign Debt/GNP	3.9	3.8	5.8	6.2	6.9	10.7	15.1	22.9	27.2
Foreign Debt Plus Direct Investment/GNP	3.9	3.9	5.9	6.4	7.4	11.3	15.9	23.9	28.0
Debt Service Ratio ¹	8.6	0.8	1.0	2.6	5.0	3.2	5.4	5.4	8.6

(continued)

Debt	1970	1971	1972	1973	1974	1975	1976	1977	1978
Total Foreign Debt	2,245	2,922	3,589	4,257	5,933	8,443	10,520	12,649	14,823
Foreign Direct Investment	81	117	175	329	486	549	650	741	830
Foreign Debt/GNP	28.7	31.2	34.0	31.5	32.0	40.5	36.7	33.8	28.5
Foreign Debt Plus Direct Investment/GNP	29.7	32.4	35.6	34.0	34.6	43.1	38.9	35.8	30.1
Debt Service Ratio	18.5	21.0	18.7	14.8	14.4	14.4	12.1	11.1	13.9

¹Includes interest on short-term debt.

Table 1 (continued)
Korea's External Debt, 1960-85
(million of U.S. dollars)

(continued)

Debt	1979	1980	1981	1982	1983	1984	1985	1986
Total Foreign Debt	20,287	27,170	32,433	37,083	40,378	43,053	46,762	44,510
Foreign Direct Investment	866	873	975	1,044	1,112	1,222	1,456	1,891
Foreign Debt/GNP	32.5	45.0	49.0	53.5	53.1	52.3	56.3	46.8
Foreign Debt Plus Direct Investment/GNP	33.9	46.5	50.4	55.0	54.6	53.7	58.0	48.8
Debt Service Ratio	16.3	18.5	20.1	20.6	18.8	20.1	21.4	--

Foreign aid inflows fell dramatically during the period. During 1960-64, they averaged \$210 million per year, over ten times the average annual accumulation of external debt. This inflow dropped to \$110 million per year during 1965-69, just one-third of the average annual debt accumulation, and only \$28 million per year during 1970-74, or 0.03 percent of the debt accumulation. Foreign aid to Korea had essentially ended by 1975.

Gross fixed investment was raised from 15 percent of GNP in 1965 to 26 percent in 1969 (Table 2). To finance the investment, declining foreign aid flows were replaced by increased reliance on external borrowing and by increased domestic savings. Firms (especially exporters) were given strong incentives to borrow abroad. A system of loan guarantees substantially reduced the risks and the real cost of borrowing abroad was negative. External debt jumped to 27 percent of GNP by 1969.

Difficulties emerged during 1970-72. As growth slowed, domestic savings dropped, increasing the current account deficit and reducing Korea's debt service ability. A devaluation to stimulate exports exacerbated repayment difficulties for externally indebted firms. The government bailed them out, and continued to pursue its investment strategy, combined with further depreciation and some monetary and fiscal restraint. Taking advantage of strong world demand, exports grew by 90 percent in 1973, stimulating a record 16 percent output growth, a spurt in domestic savings and pulling Korea out of the first period of debt difficulties.

The fourth period (1973-78) includes a second period of rapid debt accumulation, economic difficulty and recovery (Table 3). It also coincided with a major shift in economic strategy -- a renewed industrialization,

Table 2
Major Economic Indicators

	1964-65	1966-67	1968-69	1970	1971	1972	1973
GNP Growth Rate	7.7	9.7	12.3	--	9.1	5.3	14.0
Export Growth Rate	42.1	35.4	39.5	34.2	27.8	52.1	98.6
Inflation (CPI)	18.1	11.0	15.5	15.9	13.5	11.7	3.1
Current Account (%GNP)	0.3	-3.7	-8.4	-7.7	-8.9	-3.5	-2.3
Fixed Investment (%GNP)	0.2	0.2	0.3	24.7	22.5	20.4	23.2
Domestic Savings (%GNP)	0.1	0.2	0.2	0.2	0.2	0.2	0.2
M2 Growth Rate	33.8	61.7	66.7	27.4	20.8	33.8	36.4
Budget Deficit (%GNP)	--	--	--	1.6	2.3	4.6	1.6
Growth Rates:							
Nominal Wages	20.3	19.9	30.6	26.9	16.2	13.9	18.0
Real Wages	1.6	8.1	16.9	9.3	2.4	2.0	14.3
Labor Productivity							
Valued added	2.9	3.9	13.3	22.3	13.9	5.0	5.0
KPC index ¹	13.2	10.9	23.2	12.7	9.6	8.8	8.8
Terms of Trade	84.6	97.1	101.0	100.0	99.2	98.7	93.7
Real Effective Exchange Rate	116.7	104.3	98.0	100.0	105.6	114.1	132.5
Won/\$	263.0	269.0	282.0	310.6	347.2	392.9	398.3

¹From Korea productivity center, output per production worker.

Note: National income data prior to 1970 are based on 1975 constant prices, old SNA. 1970-73 data are based on new SNA.

Source: Economic Planning Board and Bank of Korea.

coupled with increased government intervention.

The "Big-Push" was a massive investment program in heavy and chemical industries, initiated in 1973 because policy makers feared that Korea's comparative advantage was shifting away from light industry. The program coincided with a resurgence in inflation, a slowdown in export growth, a rise in the incremental capital-output ratio and a deterioration in the distribution of income. Import restrictions and credit rationing increased. In addition the exchange rate was fixed (1975-79) and allowed to appreciate in real terms. Although widely viewed as a policy mistake, some of the investments (steel and autos) have begun to pay off.

Economic growth again slowed during 1974-5 in the aftermath of the oil price rise. Domestic savings again dropped, increasing the borrowing necessary to finance the investment program. Korea elected to "borrow her way" through the crisis so as to fulfill planned investment and to relax monetary and fiscal policies. As world demand recovered during 1976-78, high growth rates resumed raising domestic savings and improving the debt position.

In 1979, Korea again underwent a shift in economic strategy. Motivated by concern over rising inflation rates and economic distortions from the Big Push, a new stabilization plan included monetary and fiscal restraint plus the gradual reduction of price controls, import restrictions and financial market interventions.

However, 1979-82 were years of crisis for Korea. In 1979, the assassination of President Park together with a disastrous agricultural harvest and the second oil shock all contributed to a severe economic and

Table 3
Major Economic Indicators
(1973-78)

	1973	1974	1975	1976	1977	1978
GNP Growth Rate	14.1	8.5	6.8	13.4	10.7	11.0
Export Growth Rate	98.6	38.3	13.9	51.8	30.2	26.5
Inflation (CPI)	3.10	24.3	25.3	15.3	10.1	14.4
Current Account (%GNP)	-2.3	-10.8	-9.1	-1.1	0.0	-2.1
Fixed Investment (%GNP)	23.2	25.6	25.3	24.4	27.3	31.3
Domestic Savings/GNP	22.8	19.9	19.1	23.9	27.5	28.5
M2 Growth Rate	36.6	24.0	28.2	33.5	39.7	35.0
Budget Deficit/GNP	1.6	4.0	4.6	2.9	2.6	2.5
Growth Rates:						
Nominal Wages	18.0	35.3	27.0	34.7	33.8	34.3
Real Wages	14.3	8.8	1.4	16.8	21.5	17.4
Labor Productivity ¹						
Value added	5.0	2.4	2.2	2.4	10.3	12.6
KPC index	8.8	11.4	11.6	7.5	10.5	11.9
Terms of Trade	136.2	110.9	100.0	114.1	122.0	127.9
Real Effective Exchange Rate	117.1	101.1	100.0	93.6	94.6	97.8
Won/\$	398.3	404.5	484.0	484.0	484.0	484.0

¹From Korea Productivity Center. Output per production worker.

Note: Based on new SNA method.

Source: Economic Planning Board, Bank of Korea.

political crisis in 1980. The military assumed effective control of the country in May 1980 under General Chun Doo Hwan. He was elected President in 1981 and his term is due to end in 1988.

The poor 1979-82 performance is documented in Table 4. Output stagnated, actually declining during 1980. As domestic savings plunged, the current account deficit mushroomed, financed by massive external borrowing. Korea accumulated over \$22 billion of debt during 1979-82, raising the stock to 53.5 percent of GNP.

During 1980-81, the exchange rate was devalued, however the stance of monetary and fiscal policies alternated. Korea continued to borrow heavily to maintain investment. By 1982, growth was still low by Korean standards (5.4 percent) and exports stagnated, but inflation and the current account deficits had fallen significantly. The government initiated a more expansionary policy to stimulate growth.

As world demand recovered and the terms of trade improved during 1983-84, Korea again underwent a remarkable economic recovery. Growth rates spurted. Savings rose reducing the current account deficit. Authorities responded to the 1985 slowdown in export growth as world demand stagnated with 6 percent real depreciation in 1985, a further 15 percent real depreciation in 1986.

By 1986, the economy was booming, inflationary difficulties had been resolved and there was a substantial trade surplus. In contrast to many of the other large Third-World debtor countries currently negotiating rescheduling arrangements with their creditors, Korea not only met all debt service obligations, but was in the position to actually reduce her debt stock by \$2.25 billion.

Table 4
Macroeconomic and Policy Indicators for Korea: 1978-86

Year	1978	1979	1980	1981	1982	1983	1984	1985	1986 ^P
GNP Growth Rate ¹	11.0	7.0	-4.8	6.6	5.4	11.9	8.5	5.4	12.5
Export Growth Rate	26.5	18.4	16.3	21.4	2.8	11.9	19.6	3.6	14.6
Inflation (CPI)	14.4	18.3	28.7	21.3	7.2	3.4	2.3	2.5	2.3
Current Account (%GNP)	-2.1	-6.8	-8.8	-7.0	-3.8	-2.1	-1.7	-1.1	4.9
Fixed Investment (%GNP)	31.3	33.2	32.3	28.7	30.5	31.3	31.3	30.8	31.3
Domestic Savings (%GNP)	28.5	28.1	23.5	23.5	24.0	27.9	30.3	30.7	34.8
M2 Growth Rate	35.0	24.6	26.9	25.0	27.0	15.2	7.7	15.6	18.6
Budget Deficit (%GNP)	2.5	1.4	3.2	4.7	4.4	1.6	1.4	1.0	1.8
Growth Rates:									
Nominal Wages	34.3	28.6	22.7	20.1	14.7	12.2	8.1	9.9	9.1
Real Wages	17.4	8.7	-4.7	-2.6	6.9	10.4	5.7	7.3	6.7
Labor Productivity									
Value added	12.6	16.0	-3.9	11.1	-1.8	4.2	12.0	-0.8	7.6
KPC index	11.9	15.9	10.6	18.1	7.8	13.6	10.5	7.1	13.6
Terms of Trade	117.8	115.3	100.0	97.9	102.2	103.1	105.3	105.9	114.7
Real Effective Exchange Rate	109.0	97.2	100.0	103.6	103.2	110.6	114.4	121.2	139.2
Won/\$	484.0	484.0	607.4	681.0	831.1	775.8	806.0	870.0	881.5

¹From Korea Productivity Center. Output per production worker.

Note: Based on new SNA method.

Source: Economic Planning Board, Bank of Korea.

III. The Pieces

A. External Debt

Foreign capital inflows have played a critical role throughout Korea's recent development. The preceding discussion has already emphasized the importance of foreign aid in the decade following the Korean War and documented the rapid accumulation of external debt, concentrated during 1966-69, 1974-75 and 1979-82.

Rapid growth of output and especially exports has meant that Korea's actual debt burden grew much more slowly than the nominal debt stock. Although the debt (denominated in U.S. dollars) grew at an average rate of 34.6 percent in the eighteen years from 1964 to 1982, the debt to GNP ratio reached 53.5 percent, while the ratio of debt service to exports reached only 20.6 percent. Korea ranked only eleventh in terms of her Debt/GDP ratio and fifteenth in terms of her debt service ratio.² Korea's growth performance is a key piece of the puzzle surrounding the quick adjustment to the 1979-82 debt crisis.

External borrowing in Korea was used primarily to finance current account deficits. In particular, there has been little capital flight. This points to an analysis of domestic savings and investment as the key to explaining debt accumulation, because the current account deficit, or foreign savings, finances the portion of investment not financed domestically.

It is also notable that Korean debt has been carefully monitored by the Ministry of Finance since the borrowing began in the early 1960s. Applications for loans must be approved, and the government has actively used the allocation of foreign (and domestic) credit as part of an industrial policy, providing growth incentives for particular industries and firms.

Borrowing is a central component of Economic Planning in Korea. In many periods, the amount of borrowing required to finance desired investment was forecast quite accurately, however unexpected external and internal developments during 1974-5 and 1979-81 meant that the forecast turned out to be a sizable underestimate. In any case, the Korean government has maintained excellent debt statistics throughout the period. It was not faced with the additional difficulty of faulty or incomplete information in responding to the 1979-80 crisis.

B. Economic Growth

Korea's phenomenal growth rates since 1965 have been well documented. Of particular significance is that Korea was able to avoid the dramatic slow-down which most of the other fast growers experienced after the first oil price shock. A detailed analysis of the economic sources of Korea's growth identifies fixed capital accumulation as the central factor.

During the 1960s, Korean growth is attributable to a combination of increased factor accumulation, improved resource allocation, economies of scale and technological improvement. Fixed capital accumulation accounts for 1.1 percent average annual growth during 1963-72. In contrast, capital accumulation accounts for a growth rate of 2.6 percent during 1973-82. Korea offset reductions in factor productivity after the first oil shock with a substantial increase in investment.

Increased labor has also played a key role. The average work week increased throughout the period to 54.8 hours, placing Korea at the top of the International Labor Organization's list. Furthermore, the work force is well-educated and disciplined.

It is interesting to point out that the sources of Korean growth are quite different from the sources of Japanese growth during her 1953-71 rapid acceleration period. Factor accumulation explains only 45 percent of the Japanese growth rates as compared to 60 percent of the Korean growth rates.

A decomposition from the demand side identifies exports as the "engine of growth" during 1975-85, as well as during the earlier period. It is important to stress the role of exports because, as mentioned above, exports generate the foreign exchange essential to repaying external debt.

Investment demand has also been consistently strong. However, since import requirements for investment ranged from .38 to .48, investment has been only a moderate source of demand for domestic output. Finally, we point out that government consumption has played at best a minor role.

The data also document that labor productivity has consistently grown faster in the manufacturing than in the nonmanufacturing sector. The domestic price of manufactured goods -- a proxy for the "tradeable goods sector" -- rose relative to the price of other -- nontraded -- goods throughout the 1960-85 period. However this real appreciation has represented technical progress and not a deterioration in external competitiveness or a reallocation of resources away from the production of tradeables.

One of the most enviable aspects of Korea's recent recovery has been trade balance improvement combined with growth. In contrast, most debtor countries have achieved trade surpluses through recession induced reductions in imports. In fact, the very low income elasticities of Korean imports during 1981-83 are unusual by Korean standards. They are explained in large part by disastrous harvests during 1978-80, necessitating a surge in food

imports, followed by a very favorable harvest during 1981-2 which both raised domestic output and reduced imports. Exports did not begin to recover (in value terms) until 1983, and this turnaround is explained by a combination of increased world demand, a terms of trade improvement, the lagged impact of a real depreciation and numerous investments targeted to export industries gradually coming on stream.

C. Investment and the Five-Year Plans

Korea instituted a series of Five-Year Economic Plans, beginning in 1962. The first step in the formulation of these plans has been to determine the investment required to achieve a desired rate of growth. Thus, investment for growth has been the number one priority, while external borrowing emerges at the other end as the residual -- the gap between investment and available domestic financing. In the mid 1960s, it was an important supplement to declining foreign aid. More recently it has been used to substitute for shortfalls in domestic (especially household) savings.

The Plans identify particular sectors of the economy for growth with overwhelming focus on exports. Furthermore, the government has actively controlled the allocation of credit, thereby playing a key role in determining the industrial concentration of capital accumulation.

Even the best plan will have little impact if it can not be implemented. A large part of the success of the Five Year Plans is attributable to Korea's centralized decision making combined with a very close link between government and business. Authorities maintain current data, including information about individual firms' performance. Decisions are made quickly, and policies are

pragmatic, often involving direct intervention at the firm level. One implication of this approach has been that, by selecting previously successful firms to undertake new projects, the government has helped to create a number of large conglomerates (chaebol) and a highly concentrated industrial structure.

D. Savings Behavior

Korea's savings rate has risen from 14 percent in 1965 to over 34 percent in 1986, however, the remarkable secular increase has been interrupted periodically. These plunges have accelerated foreign borrowing so as to finance desired rates of investment, leading to a "crisis".

Two aspects are especially notable. First, savings declines are primarily attributable to drops in household savings, and not to deteriorating government budgets. Second, current account improvement during the adjustment has not been brought about by cuts in investment to close the gap. Instead, the key has been the recovery of household savings, supplemented by increased government savings.

Disaggregation shows that both the secular rise and the plunges occurred in the household sector. The performance is explained quite well by a model in which the marginal propensity to consume is higher out of permanent income than out of transitory income. Thus, Korea's strong growth, leading to upward revisions in permanent income, accounts for the secular rise in savings, while growth slowdowns account for the 1970-71, 1975 and 1980-81 plunges, as households reduced savings to smooth consumption. Although interest rates are estimated to affect savings positively, we do not find the estimates to be significantly different from zero.

E. Exchange Rate Policy

Overall, Korea has followed a consistent, credible exchange rate policy, maintaining a competitive, sometimes undervalued, real exchange rate with low variance. In adjusting to external imbalance during both 1974 and 1980, the policy packages included a substantial (20 percent) one shot devaluation in addition to an exchange rate regime change.

The nominal exchange rate was fixed to the U.S. dollar during 1975-79, during which time authorities did permit a 14 percent real appreciation. Since 1980, the exchange rate has been continually adjusted vis a vis a basket of currencies. The real exchange rate depreciated by 6 percent during 1980-82, and by a further 14 percent during 1982-86. There has been gradual appreciation during 1987.

F. Wages and Competitiveness

Even more striking than Korea's success in maintaining external competitiveness throughout most of the 1965-86 period is the fact that real depreciations were often (e.g., 1973, 1983-86) accompanied by real wage increases. Again, rapidly increasing labor productivity is the key to the puzzle, providing a wedge which can be split between increased competitiveness and increased real income.

During 1965-72, real wages grew at an average annual rate of 9.0 percent while productivity (using the value added measure) grew by 14.4 percent. However, during 1973-79, real wages grew by 12.5 percent, outpacing the 11.1 percent productivity growth. Shortages in skilled labor associated with the Big-Push towards heavy industrialization, led to rapid nominal wage gains.

Unit labor costs, measured in dollars, grew 2.3 times as quickly for Korea than for Taiwan, a major competitor in third markets.

It is important to point out that real wages declined both at the outset of Korea's export led growth and as Korea reestablished her competitive position after the 1975-79 real appreciation. During 1960-64, the average annual real wage decline was 1.96 percent, despite 7.46 percent productivity growth. Real wages fell at the beginning of the adjustment (1981-2) with all of the productivity gains going to reduce unit labor costs. This, plus exchange rate depreciations dramatically improved Korea's competitive position since 1982.

We note a few other characteristics of Korea's labor market. Worker organizations are extremely weak. There is evidence that they have increased job security, but not that they have influenced wages. Bonuses average 15 percent of employee compensation, which enhances flexibility. Finally, the fact that wages are not indexed to past inflation rates has meant that inflation shows little inertia.

G. Trade Policy

Korea's switch from a policy of import substitution to one of export promotion during 1960-64 is well known. However, despite the liberalization of many import restrictions, trade policies continued to play a central role. In particular, tax preferences and interest rate subsidies became important mechanisms to subsidize domestic industries after 1965. Through the mid 1970s, export incentives were maintained with little variability. Subsidies were used to compensate exporters during periods of real appreciation.

Import restrictions increased during the Big Push and have been gradually relaxed since 1980. Quantitative restrictions, domestic content and other regulations have remained critical, so that tariff rates substantially underestimate the degree of protection. For example, the share of manufactured items subject to import restriction jumped from 34 percent in 1968 to 61 percent in 1978. These restrictions have been important in developing "infant industries" such as automobiles and steel allowing Korea to become competitive enough to begin exporting these products. The restrictions help to explain why almost all Korean imports are raw materials, intermediate products or capital goods, with consumer products amounting to less than 5 percent of Korean imports.

Korea also stands out in not maintaining a structure of protection which penalizes agriculture. The political economy of that outcome is clearly linked to the relatively equitable income distribution due primarily to the land reform.

H. Industrial Policy

Korea has been extremely successful in selecting "growth industries", and in managing the industrial transition for these infant industries. A large part of the success lies in the development of credible, comprehensive strategies in which investment projects to promote exports formed the cornerstones of Five Year Macroeconomic Plans.

Korean businesses targeted for expansion have not been concerned about policy inconsistencies or government policy reversals. They have been given preferential access to domestic credit, to external funds and to imported

materials. The government has maintained its commitment, bailing out firms threatened with bankruptcy during downturns or financial panics. It has also created a few conglomerates which are enormous, even by world standards.

In retrospect, some of the policies were mistakes -- particularly during the 1974-79 Big Push. For example, government intervention led to substantial overcapacity in petrochemicals. However, the entire policy should, by no means, be written off as a mistake. Many of the investments in heavy industries are beginning to pay off and exports of these products are growing rapidly.

I. Fiscal Policy

Fiscal policy in Korea is perhaps most notable for the role it did not play in accumulation of external debt. Government savings has been positive in every year since 1962.

The budget deficit (which includes public investment as an outlay) has been kept under control, ranging from 1 percent to 4 percent of output. A tax reform and switch to value added taxation in the 1970s did succeed in raising revenues from 15 percent to 18 percent of GNP. Large deficits in 1975 and 1980-81 are attributable primarily to increased expenditures in the Grain Management Fund. Social expenditures, such as education and housing, have been low historically, but rising over time. Since 1980, they have amounted to 30 percent. Indicators of fiscal stance show that fiscal policy has been counter cyclical, used by the government in attempts to "fine-tune" economic performance.

Overall, fiscal deficits have not been financed through rapid money creation. The deficits themselves have been relatively small. Also

authorities have alternated between domestic and foreign credit. For example, after jumps in the banking sector credit to the public sector during 1980-81, net credit was reduced during 1982-84.

J. Monetary Policy

The banking system, including the Bank of Korea, has been monitored by the Ministry of Finance since 1962 so that macroeconomic policy making is extremely centralized. We highlight four aspects. The first is the key role for credit allocation in the industrial strategy, as discussed above. A second objective of monetary policies (especially interest rate adjustments) has been to increase household savings. As discussed above, it is very difficult to quantify how large a part this tactic has played in raising savings rates.

Third, Korean financial markets have three levels. The official banking sector is highly controlled, although there has been some liberalization since 1982, including the privatization of five commercial banks. There is also a partially controlled nonbank financial sector, and an unorganized curb market. The latter two have added flexibility to Korea's financial system, providing credit (often at high interest rates) to those firms which were not given access to scarce bank credit. Since a 1982 financial scandal, however, the curb market has shrunk considerably. Nonbank financial institutions have been growing rapidly, accounting for one half of all deposits of banks plus nonbanks in 1985, as compared to one fifth in 1978.

Korea's financial system has been anything but a unified system in which credit is allocated by market forces. While it is certain that the outcomes

under such a system would have been different, it is very difficult to assess whether they would have been "better" or "worse". To us, the most sensible conclusion is that the Korean government successfully used an active and pervasive policy of intervening in financial markets to promote its growth objectives.

Finally, there has been some movement towards financial liberalization of the banking sector. But unlike the trade liberalization, the changes so far seem to have been greater on paper than in practice. Credit allocation remains a cornerstone of Korean industrial policy.

K. Two Themes

Two unifying themes emerge from these ten pieces in the puzzle of Korea's successful performance. The first is the importance of rapid growth rates (particularly of exports), rising labor productivity and expanding human and physical capital resources. These factors gave Korea the leeway to borrow heavily while keeping the burden of debt repayments manageable and to avoid squeezing real incomes when increasing international competitiveness. The rapid productivity growth in export and import competing goods production has eased the problem of mobilizing and transferring domestic resources so as to pay external debts.

The second theme is the usage of active, interventionist government policy which is credible, consistent and coherent. These policies placed investment to promote exports as the number one priority and led the economy through a fundamental industrial restructuring.

IV. Implications: A Synthesis

In this section, we synthesize the pieces discussed above in order to answer the questions posed at the outset. The first question, important in distinguishing Korea's experience from that of many other debtor countries, is why the debt crises occurred.

Since 1965, Korea has been vulnerable to external and internal shocks because of its determined investment policy which left no buffers between desired investment and domestic savings. External borrowing was treated as the buffer, or residual.

The country has been hit by a number of external shocks, in particular oil price and interest rate changes, but the role of internal "shocks" must not be underestimated. During 1974-5, terms of trade deterioration accounts for only a part of the current account deficit. Like 1970-72, this period seems better described as a slowdown than as an economic crisis. External factors were more important during 1979-80. However, the crisis would have been much less severe if these had not been exacerbated by the agricultural disaster, political turmoil and previous policy mistakes.

How was Korea able to recover so quickly from slowdowns and crises? We believe the central factor has been successfully distinguishing between permanent and temporary shocks, and responding appropriately. The devastation of the Korean War was clearly a permanent shock. In designing and carrying through the impressive structural readjustment of the 1960s, policy makers learned how to put together an adjustment package that worked.

They chose to embark on another structural readjustment during 1973-79 because of pessimistic forecasts for medium term growth on the 1960s

industrialization path. In contrast, Korea borrowed to smooth adjustment to the 1973 jump in oil prices because the shock was judged unlikely to alter the medium to long run prospects for heavy industry. However, policy makers have not been rigid. A third shift in focus came as doubts emerged about the efficacy of further heavy industrialization, and the economy found itself saddled with the massive debts accumulated during 1979-80.

The point is closely linked to the role of external debt in Korea's adjustment. The debt has been used to supplement domestic savings in financing investment, enabling faster rates of growth. The debt has also been used to smooth over temporary shocks, without jeopardizing the on-going structural adjustment plan. However, Korea has been admirable in not using external borrowing to avoid undertaking a structural readjustment.

What is the adjustment package that has worked for Korea? The centerpiece has been a comprehensive export focused investment plan, operationalized through competitive exchange rates, credit rationing, tax and other incentives for targeted industries, trade policies and allocation of external credit. Initial declines in real wages have helped to boost competitiveness, but once the investment-growth cycle has been put on track, productivity gains have been split between raising wages and enhancing competitiveness.

Traditional macroeconomic "stabilization" tools -- monetary expansion and fiscal deficits -- have been important in the passive sense that they have been kept in line. Fiscal deficits have remained small and authorities have been careful to limit domestic credit expansion to the public sector. However, these policies played at best a supporting role in pulling Korea out

of slowdowns and crises. Both were quite variable with many reversals during 1980-81. By the time a definite monetary/fiscal expansion emerged in 1982, Korea was already well on the way to recovery.

Good fortune has also helped Korea to recover. In particular, the first oil shock gave Korea an unexpected boost during 1976-78 through revenues from construction in the middle east. The recent recovery was fueled by terms of trade improvements beginning in 1981.

V. Lessons

We begin by pointing out two lessons which, most certainly, can not be learned from the Korean experience. The first is how to design "short-run macro-economic stabilization" packages. There are no "quick-fixes" in Korea's recent history.

The second is the benefits of liberalized trade regimes and (domestic and international) capital markets. Active intervention has been a mainstay of Korean policy. However, there are numerous examples of extensive intervention in other countries which have coincided with poor economic performance. Korea does contain lessons about which types of intervention are likely to be effective.

We draw four lessons from Korea's experience. A first lesson is the value of credibility, consistency and coherence in economic policy. As in Korea, this may well necessitate coordinated trade, industrial and credit policies in order to promote infant industries. It certainly includes maintaining a competitive real exchange rate together with a sustainable fiscal policy, and moderate monetary growth.

A second lesson is the value of long term structural adjustment policy with investment in exports as the top priority. When things have gone well in Korea, high rates of investment have stimulated growth, raising both domestic savings and export earnings and enabling Korea to finance the external debts. When difficulties emerged, Korea consistently avoided cutting investment so that the economy was poised to take resume growth when external and/or internal conditions improved.

Of course, the difficulty with such an investment program is that it must be financed, and extensive borrowing can lead to repayment difficulties. The Korean experience highlights the value of external borrowing in enabling an investment policy to be carried through, as distinguished from external borrowing used to avoid structural adjustment.

Finally, Korea's ability to recover from downturns emphasizes the value of monitoring economic performance and maintaining accurate statistics for key variables.

VI. Prospects

The prospects for rapid growth to continue over the short to medium term are excellent. Our view is based both on Korea's recent good fortune (especially the decline in oil prices and interest rates and the appreciation of the Japanese yen) and on Korea's very competitive position as a result of 1985-6 real depreciations and the heavy investments over the past decade which are beginning to pay off.

We look at two of the many policy issues facing the government. First, some gradual real appreciation is unlikely to disrupt growth prospects, and may well be important to mitigate protectionism in the U.S.

Second, many have expressed surprise that Korea has decided to reduce the external debt. There remain many high return investments. There are also arguments for borrowing so as to take advantage of current favorable external conditions through investment and stockpiles. On the other hand, Korea does have a substantial external debt and reducing it will reduce the potential for future debt crises. Furthermore, careful forward looking decision making has been an asset in the past. Caution today may well pay off handsomely as external conditions become less favorable down the road.

In addition to important social and political issues, there are two difficulties facing the country. Continued access to especially U.S. markets is critical to continuation of Korea's export led growth. Current efforts to identify new markets for Korean products and to reduce dependence on the U.S. are timely given the uncertainties about U.S. trade policy.

Finally, shifts in Korea's industrial mix have created a new domestic policy problem -- how to respond to the difficulties of declining industries. The options, involving distribution and efficient resource allocation, are important and controversial. Thus, incorporating declining industries into an industrial policy which has successfully targeted growing industries poses a fundamental challenge to Korean economic planning. Hopefully, Korea's response will result in new lessons.

Footnotes

1. Readers are referred to the detailed study for further discussion of points made in this paper. The study also contains a comprehensive list of references. A brief list is provided at the end of this paper.
2. These data, for 1983, are quoted from B. Aghevli and J. Marquez-Ruarte, Table 6, p. 21.

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